

# Profile and Development Agroindustry Strategy at Bone Regency

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**Abstract.** Over the past five years (2017-2021) the economic structure of Bone Regency has been dominated by 4 (four) business field category, namely agriculture, forestry, fisheries and the processing industry with a percentage of 48% of businesses (agriculture, forestry and fisheries) and 6.88% of the processing industry. To continue to spur the growth of the economic sector, especially after the pandemic, agroindustry development is the main choice. The purpose of this research is to build an agroindustry profile based on strong, medium, and weak criteria and develop an agroindustry development strategy according to the profile that has been built so that it can be useful as a source of information as well as a reference for relevant stakeholders. The categorisation of strong, medium and weak agroindustry is based on the analysis of industrial data obtained from both government and stakeholders complemented by literature study while for strategy formulation using SWOT analysis. The categorisation results place the agroindustry of forest products and livestock products into the category of weak agroindustry, agroindustry of horticultural and secondary crops and plantation products into the category of moderate agroindustry and for the category of strong agroindustry are Cereal Products and Fishery Products.

## 1 Introduction

The development of agroindustry is basically an effort to utilise the results of natural resources in a sustainable manner supported by the availability of humans and science and technology. Agroindustry is one of the strategic agribusiness subsystems, where its development is expected to increase the added value of agricultural products through the utilisation, development and mastery of processing technology. The role of agroindustry in the framework of agricultural development is the main driver of the development of the agricultural sector, agroindustry as one of the sectors capable of increasing the income of agribusiness actors and being able to encourage the emergence of new industry.

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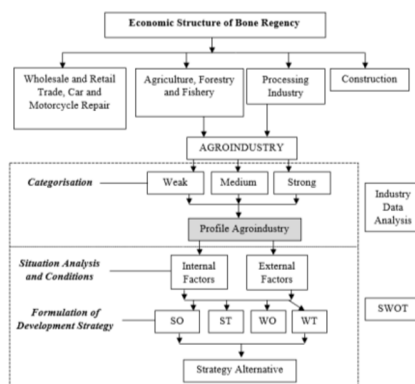
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The agricultural sector plays an important role in the growth of the Gross Regional Domestic Product (GRDP) of Bone Regency, the phenomenon of increasing GRDP growth in 2021 based on the release, statistics agency of bone regency, Bone In Numbers Year 2022 In terms of contribution (GRDP) by business field over the last five years (2017-2021), the economic structure is dominated by several business field category, namely: agriculture, forestry, fisheries, processing industry, construction and wholesale & retail trade; repair of cars & motorbikes. However, the largest share is given from the Agriculture, Forestry and Fisheries category with a percentage of 48%, this is because Bone Regency itself has the largest agricultural land in South Sulawesi Province and is the largest rice contributor in South Sulawesi.

Departing from the above facts and based on the results of Musdalifah's research in 2018 on bone district has enormous potential for agroindustry development, therefore the development of agroindustry in bone district needs to get the attention of both the central government, local government, and related stakeholders. The agroindustry development strategy is different for each region due to differences in potential, problems and characteristics of the region, therefore before determining the priority development strategy, the agroindustry profile is needed first. The purpose of this study is to build an agroindustry profile based on strong, medium, and weak criteria and develop agroindustry development strategies according to the profile that has been built. The usefulness of this research is as a source of information as well as a reference for relevant stakeholders, especially the local government in developing agroindustry, especially in the district.

## 2 Methodology

This research uses qualitative and quantitative approach methods, in the research design, researchers at the initial stage identify the industry in general and agroindustry specifically based on micro, small, medium and large scales by analysing agroindustry data available at the local government, central and related stakeholder data (primary, secondary and statistical data) then from the results of the identification further categorised based on strong agroindustry, medium agroindustry and weak agroindustry. After the categorisation is carried out, SWOT analysis is carried out, SWOT analysis aims to determine internal and external factors for the area and focus of development and continued by determining alternative agroindustry development strategies for bone regency and the analysis produces further strategies. Data collection techniques in the research implementation process were carried out by direct observation and interviews with several related respondents/experts (actors, industry players, government and universities) in the field of agricultural/agroindustry expertise using a questionnaire.



**Figure. 1.** Research Framework

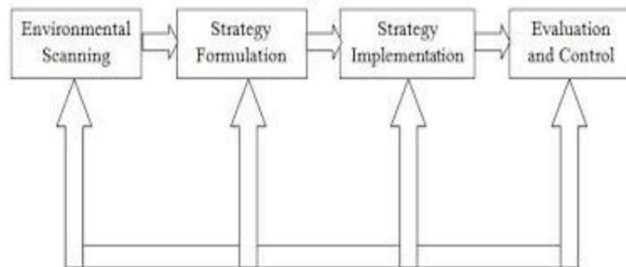
### 3 Literature review

#### 3.1 Agroindustry

Agroindustry is derived from the two words agricultural and industry, which means an industry that uses agricultural products as its main raw material or an industry that produces a product that is used as a means or input in agricultural businesses. The definition of agroindustry can be elaborated as an activity that utilises agricultural products as raw materials, designs and provides equipment and services for these activities. Agroindustry is an activity with the characteristics of increasing added value, producing products that can be marketed or used or eaten, increasing shelf life, and increasing the income and profits of producers. The nature of its activities is able to create jobs, improve income distribution and has a considerable capacity to attract agricultural sector development [1].

#### 3.2 Strategy

Strategy is a series and managerial actions that determine the company's performance in the long term, strategy management includes environmental observation, strategy formulation (strategy planning or long-term planning), strategy implementation, and evaluation and control. Strategy management emphasises the observation and evaluation of environmental opportunity and threats by looking at the strengths and weaknesses of the company. Strategy are formulated basically to form a 'response' to relevant external changes of an organisation. These external changes will certainly be answered by paying attention to the internal capabilities of an organisation [2].



**Figure. 2.** Strategy management process.

#### 3.3 SWOT

SWOT analysis is the systematic identification of various factors to formulate an organisational strategy. This analysis is based on logic that can maximise strengths and opportunity, but can simultaneously minimise weaknesses and threats. SWOT is a model, strategy and business development planning method used to evaluate strengths, weaknesses, opportunities and threats in a project or a business speculation. These four factors form the acronym SWOT (strengths, weaknesses, opportunities, threats) [3].

SWOT analysis can be applied by analysing and sorting out various things that affect the four factors, then applying them in a SWOT matrix image, where the application is how strengths are able to take advantage of existing opportunity, how to overcome weaknesses that prevent benefits from opportunity, then how strengths are able to deal with existing threats, and finally how to overcome weaknesses that can make threats real or create a new threat [3].

## 4 Result

Analysis of qualitative data obtained through in-depth interviews and direct observation in bone district, to determine the categorisation of strong, medium and weak agroindustries, the categorisation results are as follows: 1. the strong agroindustry category is the agroindustry of cereal products and fishery products, 2. the medium agroindustry category is the agroindustry of horticultural/secondary crops and plantation products, and the weak agroindustry category is the agroindustry of forest products and livestock products.

After obtaining the results of each agroindustry categorisation, it is continued with SWOT analysis to determine alternative strategies. According to [4] there are three stages in determining alternative strategies as follows:

- a. The input stage, this stage is the collection of basic information before formulating the strategy. the process carried out is to analyse the internal and external factors of the company which can be presented in the IFAS (internal factor assessment strategy) and EFAS (external factor assessment strategy) matrix.
- b. The integration stage, this stage is the formulation of various alternative strategies by combining various internal and external factors that have been obtained in the previous stage. This process can be analysed in the IE (internal-external) matrix and SWOT (strength, weakness, opportunity, threats) matrix.
- c. The strategy selection stage at this stage is to select the most suitable from the various alternative strategies that have been obtained through the IE matrix and SWOT matrix.

### 4.1 Weak agroindustry IFAS and EFAS matrix

**Table 1.** Matrix IFAS dan EFAS.

	Weight	Relative	Rating	Score
<b>STRENGTH</b>				
[Raw material quality is good]	5	0,154	4	0,62
[Labour comes from surrounding areas]	4,25	0,131	3,25	0,43
[Agroindustry location close to raw material sources]	4,75	0,146	3,5	0,51
[Quality processed product]	4,75	0,146	4	0,58
Total	18,75	0,57692		2,14
<b>WEAKNESSES</b>				
[Conventional technology]	3,25	0,100	3,25	0,33
[Inadequate human resource capacity]	3,25	0,100	2,5	0,25
[Weak Marketing Management]	3,5	0,108	2,75	0,30
[Limited capital investment]	3,75	0,115	3	0,35
Total	13,75	0,42308		1,22
		1		
		32,5	(x)	0,92

	Weight	Relative	Rating	Score
<b>OPPORTUNITIES</b>				
[Technology development]	5	0,137	3,5	0,48
[Wide and open market]	4,75	0,130	3,5	0,46

[Capital Financing Programmes are Increasingly Diverse]	4,5	0,123	3,5	0,43
[Government support in agroindustry development]	4,75	0,130	4	0,52
Total	19	0,52055		1,89
<b>THREAT</b>				
[Increasingly innovative Competitor Technology]	4	0,110	3	0,33
[Raw material price fluctuations]	4,5	0,123	3	0,37
[Low consumer interest in local products]	4	0,110	3	0,33
[Product qualification standards are increasing]	5	0,137	2,75	0,38
Total	17,5	0,47945		1,40
		1		
		36,5	(y)	0,48

Based on the results of the analysis in table 1 for forest product and livestock product agroindustry (weak category agroindustry), it shows that the internal aspect of strength has a greater score than weakness, resulting in a positive value for the x value. Good quality raw materials is the component that has the highest score, namely 0.62, this shows the potential of natural resources from forest products and livestock products in the district. Bone really supports the production of good quality processed products. Limited capital investment is the weakness component which has the highest score, namely 0.35. This shows that the inclusion of these 2 agroindustry into the weak category is strongly influenced by low investment in this sector. Meanwhile, for the external aspect, the total score for opportunities is greater than threats, resulting in a positive y value. Respondents assessed that government support in developing agroindustry was the biggest opportunity in developing this agroindustry with a score of 0.52. Meanwhile, for threats, increasing product qualification standards are considered the most threatening thing with a score of 0.38.

#### 4.2 Medium agroindustry IFAS and EFAS matrix

**Table 2.** Matrix IFAS and EFAS.

	Weight	Relative	Rating	Score
<b>STRENGTH</b>				
[Raw materials are available on an ongoing basis]	3,75	0,127	2,75	0,35
[Labour comes from the surrounding area]	3,5	0,119	3	0,36
[Agroindustry location close to raw material sources]	3,75	0,127	2,25	0,29
[Processing Technology has evolved]	3,25	0,110	2,75	0,30
Total	14,25	0,48305		1,29
<b>WEAKNESSES</b>				
[Inadequate human resource capacity]	3,5	0,119	3	0,36
[Marketing Management]	3,75	0,127	3,25	0,41
[Limited capital investment]	4	0,136	3,5	0,47

[Low product innovation]	4	0,136	2,5	0,34
Total	15,25	0,51695		1,58
		1		
		29,5	(x)	-0,29

	Weight	Relative	Rating	Score
<b>OPPORTUNITIES</b>				
[Wide and open market]	4,25	0,134	3,5	0,47
[Capital Financing Programmes are Increasingly Diverse]	4	0,126	2,5	0,31
[Government support in agroindustry development]	4,25	0,134	2,75	0,37
Total	16,5	0,51969		1,50
<b>THREAT</b>				
[Increasingly innovative Competitor Technology]	3,75	0,118	2,75	0,32
[Raw material price fluctuations]	3,75	0,118	3	0,35
[Low consumer interest in local products]	3,5	0,110	2,5	0,28
[Product qualification standards are increasing]	4,25	0,134	2,75	0,37
Total	15,25	0,48031		1,32
		1		
		31,75	(y)	0,18

Table 2 shows the differences in the results of the analysis with weak agroindustry, for the medium agroindustry category, namely agroindustry for horticulture and secondary crops and plantation products, shows a negative internal aspect value, which means that respondents assess their weaknesses as greater than their strengths. Limited capital investment is considered to be the most dominant weakness with a score of 0.47, while for the strength of agroindustry, the presence of a workforce is considered to be the main factor in the development of this sector with a score of 0.36. For the external aspect, respondents considered that the opportunities were still greater than the threats, thus showing positive results. Wide and open market potential is considered the greatest opportunity with a score of 0.47, while the threat to this agroindustry which is considered the most likely to have an impact is that product qualification standards are increasing with a score of 0.37.

### 4.3 Strong agroindustry IFAS and EFAS matrix

**Table 3.** Matrix IFAS and EFAS.

	Weight	Relative	Rating	Score
<b>STRENGTH</b>				
[Abundant and sustainable raw materials]	4,25	0,144	2,5	0,36
[Agroindustry players are numerous and pervasive]	3,75	0,127	2,75	0,35
[Marketing Management has evolved]	3,75	0,127	2,75	0,35
[Processing Technology has been mastered]	3,5	0,119	3	0,36

Total	15,25	0,51695		1,42
<b>WEAKNESSES</b>				
[Inadequate human resource capacity]	3,75	0,127	1,75	0,22
[Low product innovation]	3,25	0,110	2	0,22
[Institutionalisation between actors has not yet developed]	3,5	0,119	2,25	0,27
[Capital investment is uneven]	3,75	0,127	2,5	0,32
Total	14,25	0,48305		1,03
		1		
		29,5	(x)	0,39

	Weight	Relative	Rating	Score
<b>OPPORTUNITIES</b>				
[Technology development]	4	0,126	2,75	0,35
[Wide and open market]	4,25	0,134	3	0,40
[Capital Financing Programmes are Increasingly Diverse]	4	0,126	2,75	0,35
[Government support for agroindustry development]	4	0,126	2,25	0,28
Total	16,25	0,51181		1,38
<b>THREAT</b>				
[Increasingly innovative Competitor Technology]	3,75	0,118	2,5	0,30
[Raw material price fluctuations]	4	0,126	2,25	0,28
[Low consumer interest in local products]	3,75	0,118	2,5	0,30
[Product qualification standards are increasing]	4	0,126	2,25	0,28
Total	15,5	0,48819		1,16
		1		
		31,75	(y)	0,22

The strong agroindustry category consisting of cereal and fishery products agroindustry is analyzed as having positive internal and external conditions. A fairly even distribution of scores is shown in each component of strength, but there are two that are more dominant, namely raw materials that are abundant and sustainable and supported by processing technology that has been mastered by agroindustry players with the same score, namely 0.36. Meanwhile, the weakness component is the same as the previous 2 agroindustry categories, unequal capital investment is the most dominant with a score of 0.32. For the opportunity component, the most dominant is a wide and open market with a score of 0.40, and for threats, namely increasingly innovative competitor technology and low consumer interest in local products, it is the most dominant with a score of 0.3.

After obtaining the x and y values, the coordinate points have been obtained which will determine the location of the quadrant for determining strategic areas for agroindustry development in bone regency which are presented in the following figure:



Figure 3. Strategy area quadrant.

According to [5], the explanation for each strategy in the SWOT matrix is as follows:

1. SO (strenght-opportunity) strategy this strategy is based on the company's way of thinking, namely by utilising all its strengths to seize and take advantage of the greatest opportunity.
2. ST (strenght-threath) strategy this strategy is based on the strengths of the company to anticipate existing threats.
3. WO (weakness-opportunity) strategy this strategy is implemented based on the use of existing opportunity by minimising existing weaknesses.
4. WT (weakness-threath) strategy is based on defensive activities, trying to minimise the company's weaknesses while avoiding threats.

Based on Figure 3, the strong and weak categories of agroindustry are in quadrant 1 (Q1) aggressive strategy, this condition is a very profitable situation because agroindustry has opportunities and strengths so it can take advantage of existing opportunities. The strategy that must be implemented in this condition is to support aggressive growth policies or *growth oriented strategies*. Meanwhile, the agroindustry category is currently in phase 2 (Q2) of the development strategy, agroindustry faces huge market opportunities, but on the other hand has to face several internal obstacles/weaknesses. The focus of this strategy is to minimize the company's internal problems so that it can seize good market opportunities [5].

A description of alternative strategies in each agroindustry category is presented in the following table:

Table 4. Weak agroindustry quadrant.

Weak Agroindustry			
Aggressive Strategy (SO)	Streight	Opportunity	Strategy Alternative
	1 [Raw material quality is good]	1 [Technology development]	Increase Production Capacity (S1, S2, S3,O1,O4)
	2 [Labour comes from the surrounding area]	2 [Wide and open market]	Increased Competence of Local Human Resources (S2, O1, O4)
	3 [Agroindustry location close to raw material sources]	3 [Capital Financing Programmes are Increasingly Diverse]	Optimisation of technology utilisation (S4, O1,O3,O4)



	4	[Quality processed products]	4	[Government support in agroindustry development]	Increased Synergy Between Stakeholders (S3, O3,O4)
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**Table 5.** Medium agroindustry quadrant.

<b>Medium Agroindustry</b>					
<b>Strategy Development (WO)</b>	<b>Weakness</b>		<b>Opportunity</b>		<b>Strategy Alternative</b>
	1	[Inadequate human resource capacity]	1	[Technology development]	Increasing the Competitiveness of Marketing Human Resources (W1, W2, O2,O4)
	2	[Weak Marketing Management]	2	[Wide and open market]	Improving the pattern of capital partnerships with financing institutions (W3, O3,O4)
	3	[Limited capital investment]	3	[Capital Financing Programmes are Increasingly Diverse]	Improving technology utilisation for product innovation (W4, O1,O4)
	4	[Low product innovation]	4	[Government support in agroindustry development]	Expansion of Marketing Access through Government support (W2, O2,O4)

**Table 6.** Strong Agroindustry quadrant.

<b>Strong Agroindustry</b>					
<b>Aggressive Strategy (SO)</b>	<b>Strength</b>		<b>Opportunity</b>		<b>Strategy Alternative</b>
	1	[Abundant and sustainable raw materials]	1	[Technology development]	Increase Production Capacity (S1, S2, S3, O1,O2)
	2	[Agroindustry players are numerous and pervasive]	2	[Wide and open market]	Optimising the Use of the Latest Processing Technology (S2, S4, O1, O4)
	3	[Marketing Management has evolved]	3	[Capital Financing Programmes are Increasingly Diverse]	Improving partnership patterns with stakeholders (S2, O3,O4)

	4	[Processing Technology has been mastered]	4	[Government support in agroindustry development]	Improved Marketing Access Through Government Assistance (S3,O2,O4)
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## 5 Conclusion

The conclusion that can be drawn from this research is that agroindustry in bone regency has been categorized into 3 categories, including: weak agroindustry category (agroindustry of forest products and livestock products) producing aggressive strategies with IE SWOT scores (0.92, 0.48), medium agroindustry category (horticultural and secondary crop agroindustry as well as plantation products) produces a development strategy with an IE SWOT score (-0.29, 0.18), and the strong agroindustry categorization (cereal and fishery product agroindustry) produces an aggressive strategy with a strong IE SWOT score (0.39, 0.22). These three strategies can be recommendations/references for developing sustainable agroindustry, especially in bone district.

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