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Development Strategy for Smallholding Plantation Commodities in West Aceh Regency

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ABSTRACT

Plantation commodities in West Aceh Regency are one of the regional economic potency that need to be developed because this regency has enormous land potency and plays an important role in improving the regional economy and the socio-economic life of the community. This study aims to 1) find out the leading commodities of smallholding plantation in each sub-district in West Aceh Regency, and (2) the drafting a strategy for developing smallholding plantation commodities in West Aceh Regency. Location Quotient (LQ) and Shift Share Analysis (SSA) method were used to determine leading commodities. Factors of strengths, weaknesses, opportunities, and threats were analyzed descriptively. The development of a smallholding plantation strategy uses the A'WOT approach. A'WOT is a combination of Analytical Hierarchy Process (AHP) with Strengths, Weaknesses, Opportunities, Threats (SWOT) methods. The results of the study show that the commodities of smallholding plantation in West Aceh Regency are oil palm, rubber and coconut. the main strengths factor for the development strategy of smallholding plantation commodities is the potency of large land but has not been used optimally, the main weakness factor is access to capital which is still very limited while the opportunity factors that are the main factors are the contribution to the regional economy is very high and the main threats factor namely environmental issues. The application of the strategy to the development of smallholding plantation commodities, namely strengths-opportunities, namely the development of strengths by exploiting opportunities.

Keywords : A`WOT, Development Strategy, Leading Commodities, Smallholding Plantation

I. INTRODUCTION

The development of regional needs to be viewed from the condition of the region, the leading potency of the region is subsequently used as a basis for consideration in determining regional development strategies based on the relationship between the development of socio-economic conditions of the community, the potency of natural resources, as well as the availability of regional facilities and infrastructure to support economic activities in the region. Plantation as an integral part of the agricultural sector is a sub-sector that has an important and strategy role in national development. Its role is evident in the country's foreign exchange earnings through exports, providing employment, meeting domestic consumption needs, raw materials for various domestic industries, obtaining added value and competitiveness and

optimizing sustainable natural resource management [3]

West Aceh Regency is one of regency region that is developing and continues to develop West Aceh Regency also relies on natural resources as a source of regional income, lack of skilled human resources, limited capital and a variety of potency resources that not be utilized optimally that become obstacles in the development of economic growth in West Aceh Regency. The economy of West Aceh Regency is dominated by the agricultural sector.

West Aceh Regency GRDP has continued to increase over the past five years. The biggest category of gross value added (NTB) contribution is the agricultural sector which continues to provide a positive contribution to the West Aceh Regency GRDP. In 2013 the agricultural sector contribution 30.96%, in 2014 amounted to 31.02%, in 2015 amounted to 31.99%, in 2016 amounted to 32.88% and in 2017 amounted to 31.03% far from other sectors which only provided only 1 to 17% of GRDP in West Aceh Regency. Plantation commodities are one of the sub-sectors that provide the largest contribution in West Aceh GRDP to the formation of added value in the subcategory in agriculture in 2017 which amounted to 39.85%, consisting of the types commodities rubber, cocoa, oil palm, coconut, areca nut, pepper and coffee, due to increased production from this subsector, therefore the plantation subsector has the potency to continue to be developed [17].

Plantation commodities in West Aceh Regency are one of the regional economic potency that need to be developed because this district has enormous land potency and plays an important role in improving the regional economy and the socio-economic life of the community. Most of the population, especially people living in rural areas, have daily livelihoods in agriculture. Other economic sectors tend to still have very little capacity to provide employment opportunities for residents of West Aceh Regency. This indicates that the agricultural sector still dominates employment in West Aceh Regency. Therefore a study is needed so that the potency and of the plantation leading commodities that are owned can be developed and become a source of regional income and the welfare of farmers in West Aceh Regency.

Land use in West Aceh Regency is generally used for the purposes of residential areas, plantation areas, fields, land aquaculture areas, bushes and forests, The largest allocation of space in the form of primary forest is reaching an area of 115,235.90 ha or 39.36% and of both smallholding and large plantations (national private) are 51,014.20 ha or 17.42% while 166,250.10 ha or 43.22% are used for other in accordance with the allocation of the stipulated spatial plan [16]. Development of agricultural infrastructure is still a problem in developing the plantation sector in West Aceh Regency.

Based on the description above, the regional development research based on the approach of leading agricultural commodities, especially for smallholding plantation commodities very important to do in order to obtain a strategy for developing commodity-based smallholding plantation in order to boost the regional economy and improve the welfare of farmers and support regional development in the West Aceh Regency in the future. This study aims to; (1) find out the leading commodities of smallholding plantation in each sub-district in West Aceh Regency, (2) the drafting a strategy for developing the leading commodities of smallholding plantation in West Aceh Regency.

II. METHODS AND MATERIAL

This research was conducted in West Aceh Regency. Geographically, the area is located at coordinates 04°06'- 04°47' North Latitude and 95°52'- 96°30' East Longitude. Secondary data in this study are data on smallholding plantation commodities production in

2014 and 2017, data on the amount of planting area and data on the number of household that work in the plantation crops. Primary data is obtained through interviews with expert parties using a structured questionnaire. The number of expert respondents was seven people consisting of one person from Regional Planning Development Agency, two people from the Department of Estate Crops, three people from the academics and one from the farmer group. The choice of respondents was done purposely (purposive sampling) because it was considered to be directly involved in the development of the smallholding plantation sector in West Aceh Regency.

A. **Analysis Location Quotient (LQ)**

Location Quotient (LQ) analysis method is used to see the density of certain business sectors in an area compared to the same sector in the aggregate. LQ can also indicate an indication of the economic export capacity of a region and the level of adequacy of goods /services from local production of a region. LQ can show the ability to export a commodity [7]. [4] Utilized this LQ method in his research on tourism object development planning taking into account various aspects such as geographical aspects and social aspects. The LQ analysis method in this study was used to describe base commodities in 12 sub-districts in West Aceh Regency. The LQ equation according to Blakely (1994) in [6] is as follows:

$$LQ_{ij} = \frac{X_{ij}/X_{i.}}{X_{.j}/X_{..}}$$

Note:

LQ_{ij} : Location Quotient location of sub-district i for commodities j

X_{ij} : Production of each plantation commodity (ton) in the sub-district i

$X_{i.}$: Production of total plantation commodities in sub-districts i

$X_{.j}$: Total plantation production in Aceh West Regency

$X_{..}$: The value of all plantation commodities in West Aceh Regency

B. Shift Share Analysis (SSA)

Analysing the leading commodity is also used SSA (Shift Share Analysis) to see the level of competitive advantage regions, based on the performance of the local sector in the region. SSA analysis technique aims to analyse the performance of a sector shift in a region to be sorted based on sources cause a shift, to see a competitive advantage and knowing what sectors provide the largest contribution to growth in the region [12]. The general formula of equation Shift Share Analysis (SSA) as follows [12].

$$SSA = \left(\frac{X_{..(t1)}}{X_{..(t0)}} - 1\right) + \left(\frac{X_{.j(t1)}}{X_{.j(t0)}} - \frac{X_{..(t1)}}{X_{..(t0)}}\right) + \left(\frac{X_{ij(t1)}}{X_{ij(t0)}} - \frac{X_{.j(t1)}}{X_{.j(t0)}}\right)$$

(a) (b) (c)

Note:

a : Regional Component Share (RS)

b : Component Proportional Shift (PS)

c : Shift Differential component (DS)

$X_{..}$: The total value of production of the plantation sector in the total area

X_j : The total value of production of the to-i estate sector in the total area

X_{ij} : The production value of the plantation sector in the to- i unit of area j

t_1 : The point of final year

t_0 : The point of the early years

Determination of competitive commodities is determined by using a matrix table by combining criteria LQ> 1, DS> 0 (positive), planting area, number of household that work in the plantation crops, farm management system in monoculture. This is done so in a more concentrated commodity development at a sub-district.

C. Development Strategy for Smallholding Plantation Commodities

Plantation commodity development strategy formulation in which people use A'WOT analysis. A'WOT analysis of a merger between the Analytic Hierarchy Process (AHP) and Strengths, Weaknesses, Opportunities, Threats (SWOT). A'WOT analysis is used to formulate and prioritize policy strategy in the development of leading commodities. When viewed

from the subjectivity hence better AHP analysis of SWOT analysis. Therefore, by combining both AHP and SWOT analysis techniques are expected to mutually enhance and minimize the subjectivity of a policy level generated [10].

The data analysed includes the results of the assessment of the factors of strengths, weaknesses, opportunities and threats, such as the problems currently being faced, what factors are obstacles in the development of existing plantation commodities, infrastructure and accessibility and the cost structure in conducting development farming plantation commodities used to weight the SWOT components and factors. [19] In his research used this combination for strategy planning in developing leading commodities in the City of Pagar Alam. The aim is to reduce the subjectivity of assessments of internal and external factors in seeing strengths, weaknesses, and opportunities and threats.

The stages of this research are: (1) identifying factors that are strengths, weaknesses, opportunities and threats for the development of smallholding commodities in West Aceh Regency, (2) structure the analysis hierarchy of A'WOT, (3) doing weighting of components and SWOT factors from previous identification results using AHP analysis by conducting pair wise comparisons, (4) The weight obtained from the AHP calculation of each internal and external factor will be used in the Strategy Factors Analysis Summary (IFAS) and External Strategy Factors Analysis Summary (EFAS) analysis, and (5) formulating alternative strategies for developing smallholding plantation commodities in West Aceh Regency using a SWOT analysis. The scale values used for weighting in the Analytical Hierarchy Process (AHP) are presented in Table 1.

Table 1. Scale ranking of Analytical Hierarchy Process (AHP)

Interest Level	Definition
1	Both elements are equally important
3	One element is more important than the other elements
5	One element is more important than the other elements
7	One element is clearly more important than the other elements
9	The absolute element is more important than the other elements
2,4,6,8	The values between two consideration values are close together

Weighting in A'WOT analysis is a comparison of pair wise comparisons based on the opinions of experts using the Saaty's Scale. The results of the experts' opinions must be consistent, calculated by Consistency Ratio (CR). The paired matrix is said to be consistent if it is smaller than 10% (CR 0.1), meaning that the inconsistency of the opinions of experts is considered acceptable.

III.RESULTS AND DISCUSSION

Leading commodities are main stay commodities that have a strategy position to be developed in an area [9]. According to [2] more simply what are meant by leading commodities are commodities that are viable because they provide benefits to farmers both biophysically, socially and economically. Leading commodities are a type of commodity choice that is cultivated in the local area which has leading characteristics for the area when compared to other regions [11]. West Aceh Regency has smallholding plantation commodities as many as seven commodities spread across twelve sub-districts. These commodities are generally managed by local farmers each sub-district has different characteristics and potency in producing a commodity that can be used as a leading commodity in its area.

Based on the results of LQ analysis for plantation commodities using production data in 2017, all sub-districts have leading commodities which are reviewed from the production side with the LQ criteria> 1. Woyla and West Woyla sub-districts are the most namely five commodities coconut, coffee, pepper, cocoa and betel nut while Johan Pahlawan Sub-District, Panton Reu and Sungai Mas are Sub-Districts that have the least commodities amount namely one commodity, for more details seen in Table 2.

Table 2. Results of analysis Location Quotient (LQ) smallholding plantation commodities.

Sub-district	Rubber	Coconut	Oil palm	Coffee	Pepper	Cocoa	Areca nut
Johan Pahlawan	0.21	0.17	**2.89**	0.02	0.00	0.05	0.13
Samatiga	0.01	**1.51**	**2.08**	0.48	0.71	0.44	0.35
Bubon	0.03	**3.05**	0.06	**2.34**	0.00	**3.12**	**3.14**
Arongan Lambalek	0.01	**3.79**	0.02	0.41	0.44	**1.90**	**1.75**
Woyla	0.02	**1.17**	0.09	**5.99**	**10.97**	**6.34**	**7.51**
West Woyla	0.11	**1.23**	0.04	**8.36**	**20.67**	**7.84**	**5.35**
East Woyla	**2.48**	0.12	0.01	0.75	**1.07**	0.11	0.45
Kaway XVI	0.02	**2.97**	0.19	**3.91**	0.45	**2.63**	**2.66**
Meureubo	0.02	**3.01**	0.05	**1.72**	0.46	**3.73**	**3.14**
Pante Ceureumen	0.02	**3.61**	0.05	**3.71**	0.00	**1.34**	**1.76**
Panton Reu	0.89	0.14	**1.91**	0.25	0.24	0.67	0.56
Sungai Mas	**2.48**	0.12	0.00	0.58	0.20	0.34	0.31

The Shift Share Analysis (SSA) analysis using DS> 0 (positive) for smallholding plantation commodities using production data for 2017 and 2014 shows that Johan Pahlawan Sub-District, Samatiga, Bubon, Meureubo, Pante Ceureumen with at kind commodities oil palm, cocoa, coffee and coconut. Sungai Mas Sub-district is a sub-district that has five leading commodities, namely rubber, coconut, coffee, cocoa and areca nut, for more details, see Table 3.

Table 3. Results of Shift Share Analysis (SSA) analysis smallholding plantation commodities

Sub-district	Rubber	Coconut	Oil palm	Coffee	Pepper	Cocoa	Areca nut
Johan Pahlawan	-1.42	-0.10	**3.34**	**0.02**	0.00	-0.11	**0.01**
Samatiga	-1.48	0.00	**2.22**	-0.01	0.00	-0.07	-0.15
Bubon	-1.48	-0.05	-0.43	-0.01	0.00	**0.01**	-0.13
Arongan Lambalek	-1.55	0.00	**2.63**	-0.03	0.00	**0.03**	**0.38**
Woyla	-1.07	-0.07	-0.43	**0.02**	0.00	**0.04**	0.00
West Woyla	-0.71	-0.01	-0.43	**0.04**	**0.02**	**0.11**	**0.04**
East Woyla	**412.93**	**0.02**	-0.43	**0.01**	-0.01	-0.07	-0.04
Kaway XVI	-0.95	**0.04**	**4.79**	-0.02	-0.02	-0.10	0.00
Meureubo	-0.95	-0.02	-0.43	**0.01**	0.00	**0.04**	-0.08
Pante Ceureumen	-1.02	**0.04**	-0.43	-0.01	0.00	-0.09	-0.06
Panton Reu	-1.29	-0.01	**2.79**	-0.02	-0.01	**0.09**	-0.05
Sungai Mas	**707.01**	**0.18**	-0.43	**0.01**	0.00	**0.02**	**0.24**

Based on the results of LQ and SSA analysis for smallholding plantation commodities in (Table 2 and 3), the leading commodity of smallholding plantation in each sub-district, West Woyla Sub-District, is the sub-district that has most leading commodities, namely four commodities while Sub-District Woyla, Meureubo and Kaway XVI have two leading commodities reviewed from the side of production in 2014 and 2017, to select leading commodities in sub-districts that have more than one leading commodity, criteria are chosen based on planting area, number of household that work in the plantation crops and the management system, for more details can be seen in Table 4.

Table 4. Matrix for selecting smallholding plantation commodities

Sub-district	Leading Commodities	Planting Area (ha)	Number of Household That Work in The Plantation Crops	Management System
Johan Pahlawan	Oil palm	375.00	318	**Monoculture**
Samatiga	Oil palm	557.50	193	**Monoculture**
Bubon	Cocoa	47.28	42	Polyculture
Arongan Lambalek	Cocoa	165.00	47	Polyculture
	Areca nut	100.50	82	Polyculture
Woyla	Coffee	72.75	118	Polyculture
	Cocoa	115.72	297	Polyculture
West Woyla	Pepper	2.30	-	Polyculture
	Coffee	78.97	129	Polyculture
	Cocoa	87.40	124	Polyculture
	Areca nut	70.50	63	Polyculture
East Woyla	Rubber	2.14	674	**Monoculture**
Kaway XVI	Coconut	344.10	863	**Monoculture**
Meureubo	Coffee	34.00	88	Polyculture
	Cocoa	102.10	118	Polyculture
Pante Ceureumen	Coconut	302.00	36	**Monoculture**
Panton Reu	Oil palm	234.00	464	**Monoculture**
Sungai Mas	Rubber	1.41	764	**Monoculture**

According to [1] a leading commodity is a commodity planned for it' development area. [8] Said that the selection of leading commodities aims that development region concentrated in a commodity that is the most leading in comparatively, competitively and is the most dominant community farming business. Recapitulation of the number of stairs, planting broad and management system of leading plantation commodities in each sub-district in West Aceh Regency presented in (Table 5) shows that there are three leading commodities, namely rubber, coconut and oil palm where oil palm is in three sub-districts, coconut and rubber only in two sub-districts.

Table 5. Leading commodity of smallholding plantation in each sub-district in West Aceh Regency

Sub-district	Commodities	Leading Commodities
Johan Pahlawan	Oil palm	**Leading**
Samatiga	Oil palm	**Leading**
Bubon	Cocoa	Not Leading
Arongan Lambalek	Cocoa, Areca nut	Not Leading
Woyla	Coffee, Cocoa	Not Leading
West Woyla	Pepper, Coffee, Cocoa, Areca nut	Not Leading
East Woyla	Pepper	**Leading**
Kaway XVI	Coconut	**Leading**
Meureubo	Cocoa, Coffee	Not Leading
Pante Ceureumen	Coconut	**Leading**
Panton Reu	Oil palm	**Leading**
Sungai Mas	Rubber	**Leading**

Based on the results of farmer interviews in West Aceh Regency that the three commodities are very economically profitable to be cultivated. [14] states that the determination of leading commodities in an area is a necessity considering that the commodity is able to compete sustainably with the same commodity produced by other regions or that the commodity is leading comparatively and competitively and has the inter between a strong sector so that it has the

potency to act as a driving force for the regional economy.

Internal Strategy Factor Analysis (IFAS)

IFAS analysis of the internal factor matrix is used to determine internal factors related to the strengths and weaknesses that are considered important [13]. The preparation of the matrix aims to determine the level of importance and influence in the strategy of developing smallholding plantation commodities in West Aceh Regency. The level of importance of each factor is based on the results of the questionnaire given to the expert and processed in Microsoft Excel. The level of influence is obtained from the results of interviews by determining a rating of 1 (very weak), a value of 2 (rather weak), a value of 3 (strong) and a value of 4 (very strong).

Table 6. Results of matrix analysis of Internal Strategy Factors (IFAS)

Factors Internal Strategy	Weight	Rating	Score
Strengths			
Land potency	0.33	4	1.32
Support local governments	0.07	3	0.21
Source of community income	0.06	3	0.18
Community support	0.03	3	0.09
Weaknesses			
Access to capital	0.34	3	1.02
Availability of accessibility	0.06	3	0.18
Processing industry	0.05	3	0.15
Increased knowledge of cultivation techniques	0.05	2	0.10
Total	**1.00**	**24**	**3.25**

Based on the results of the Internal Strategy Factor matrix analysis, the factors that are the strengths in developing smallholding plantation commodities are the potency of land with a weight of 0.33 rating 4 and a score of 1.32 means that the potency of land has a strong influence on the development of smallholding plantation commodities while weaknesses that have strong influence are access towards capital with a weight of 0.34 rating 3 and a score of 1.02, This shows that capital factors are an obstacle for farmers in conducting their farming business, therefore the strategy designed must be able to overcome weaknesses by conducting a credit program that can be used by farmers in conducting their farming business.

External Strategy Factor Analysis (EFAS)

This analysis of external strategy factors or Strategy Factors Analysis Summary (EFAS) is done by compiling an EFAS matrix. The EFAS matrix drafting aims to determine the level of importance and influence of external factors in the form of opportunities and threats in determining the development of leading commodities in West Aceh Regency. The level importance of each factor is known based on the results of questionnaire data processing using the Microsoft Excel program. For the level of influence of each of the factors known by giving a rating value of 1 to 4 where the rating value 4 shows a very strong influence, the value 3 shows a rather strong influence, the value of 2 is somewhat weak and the value of 1 is very weak. Table 7 is a Table of External Strategy Factors Analysis Summary (EFAS) which assesses the weight of importance of each opportunities and threats factor along with a rating that shows the level of influence. The results of a multiplication of weights and ratings of each factor will be the accumulation score of external factors that will be used in the analysis of the external internal matrix.

Table 7. Results of matrix analysis of External Strategy Factors (EFAS)

Factors External Strategy	Weight	Rating	Score
Opportunities			
Regional economic income contribution	0.31	4	1.24
Central government support	0.08	3	0.24
Production of smallholding plantation products is high	0.06	3	0.18
Potency as a central area of production	0.05	2	0.10
Threats			
Environmental issues (drought, flood)	0.36	3	1.08
Climate change is uncertain	0.05	3	0.15
The level of stability commodity selling prices	0.05	3	0.15
Low productivity	0.04	2	0.08
Total	**1.00**	**23**	**3.22**

Based on the results of the evaluation of the external factor matrix analysis, the opportunity factor that has the highest score is the regional economic income contribution factor with a weight value of 0.31 rating 4 and a score of 1.24, this shows that the existing plantation commodities have a very strong influence on GRDP (Regional Gross Domestic Product) and labour absorption from this subsector, while the threats factor which has the greatest weight is environmental issue with a value of 0.36 rating value 3 and a score of 1.08 means that environmental issues have a strong influence on the occurrence of forest conversion that can result in flooding when the rainy season arrives as well as forest fires due to the opening of new land, other than that the threats factor of climate change which is causing pest attacks on smallholding plantation that exist today is difficult to overcome. Another threats factor is the level of stability of the selling price has a strong influence on the development of smallholding plantation commodities this phenomenon causes the absorption of crop yields of farmers so as to reduce the interest of farmers in farming plantations which then results in low production.

Internal and External Matrix Analysis

Drafting internal and external matrix is done to obtain more detailed planning based on the results of data on the IFAS and EFAS matrix. This is important to know as the basis for development smallholding plantation to carry out regional conditions strategies [17]. The Internal-External Matrix is a matrix that summarizes the results of evaluation of external and internal factors that place the condition of smallholding plantations in one of the nine cells, where each cell is a step that must be processed before data processing has formed IFAS and EFAS matrix with values and scores that are already quantified. The score values will be used to determine the position of the development of smallholding plantation in West Aceh Regency on the Internal-External matrix cells.

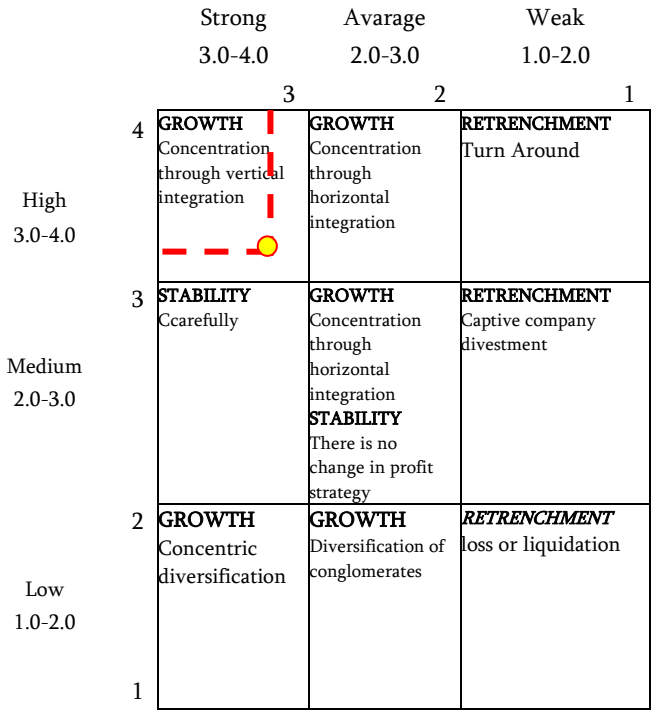

Figure 1: Results of internal and external matrix analysis

Based on Figure 1, the position of the development of smallholding plantation commodities in West Aceh Regency is only in cell I (development of smallholding plantation commodities in conditions of growth with a concentration on vertical integration). This position in cell I occurs because the IFAS factor has a score of 3.25 and the EFAS factor has a score of 3.22. This implies that in the development of smallholding plantations commodities by building processing industry in order to create added value to existing smallholding plantation products as well as the development of UMKM in the smallholding which is very necessary.

Matrix Space Analysis

Drafting the matrix space aims to further sharpen the development planning of the leading commodities of smallholding plantation in West Aceh Regency. Matrix space analysis provides information about the combination of internal and external factors that are in the quadrant of the matrix space created. The difference in strengths and weakness scores in the IFAS matrix and the difference in opportunities and threats scores on the EFAS matrix will fill the position

of the x and y values of the matrix quadrant. Thus, the position of the business quadrant for developing plantation commodities can be known by various internal and external factors that have been analysed previously.

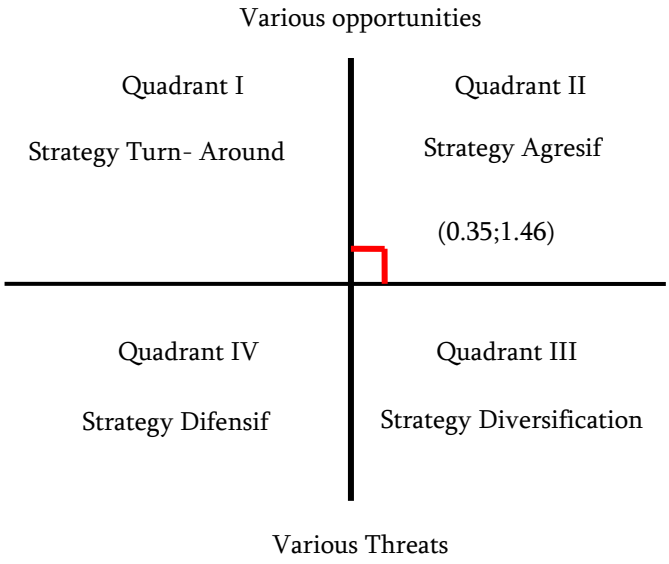

Figure 2: Results of matrix space analysis

Based on IFAS and EFAS analysis, the difference between strengths and weakness scores in the IFAS matrix is 0.35 and the difference in opportunity scores and threats on the EFAS matrix is 1.46. The value combination will produce a position in quadrant I as in (Figure 2). According to [5] in [8], business positions can be grouped in 4 quadrants namely Quadrant I, II, III and IV. In quadrant I, the right strategy to use is aggressive strategy, quadrant II diversification strategy, quadrant III turn around and quadrant IV strategy using a defensive strategy. Based on Figure 2, it is known that the position of smallholding plantation in West Aceh Regency is in quadrant I (aggressive strategy). Quadrant I show that the condition of smallholding plantation in West Aceh Regency is internally strong and has a supportive environment so that the implementation of the strategy must be done by expanding the marketing network, thus the results of space analysis reinforce the results of external internal matrix analysis.

Preparation of Policy Strategy Plans with SWOT Analysis

The strategy for development smallholding plantation commodities in West Aceh Regency is based on the results of the external and internal evaluation matrix. The choice of strategy is based on consideration of the scores obtained on each factor as well as explanations from the respondents during the interview. The preparation of the SWOT strategy is divided into four matrices, including S-O (Strengths-Opportunities) strategies which are arranged based on consideration of strengths and opportunity factors. The second strategy is the W-O (Weakness-Opportunities) strategy which is prepared based on consideration of weaknesses and opportunities. The third strategy is the S-T Strategy (Strengths-Threats) which is arranged based on factors of strengths and threats. The fourth strategy is the W-T Strategy (Weaknesses-Threats), which is based on weaknesses and threats. The overall strategy can be seen in Figure 3.

Factor Internal / Factor External	*STRENGHTS (S)* 1. Potency land that has not been utilized optimally 2. Local government support 3. Community support 4. Source of community income	*WEAKNESS (W)* 1. Access capital availability of accessibility 2. Processing industry 3. Increased knowledge of cultivation systems
OPPORTUNITIES (O) 1. Regional economic contribution 2. Central government support 3. Production of smallholding plantation is still high 4. Potency as a production centre	**I** **S-O**	**III** **W-O**
THREATS (T) 1. Environmental issues (drought, flood)	**II** **S-T**	**IV** **W-T**

2. Erratic climate change 3. Level of price stability 4. Productivity is still low		

Figure 3: Results of the SWOT matrix analysis

Based on the SWOT matrix, several strategies can be formulated by collaborating internal factors (strengths and weaknesses) and external factors (opportunities and threats).

S-O Strategy (Quadrant I):

1. Providing assistance/counselling to farmers so that the potency u land use in providing input to the land can be carried out optimally so as to increase the production of the plantation (SO1).
2. Strengthening the synergy between farmers, regional and central government for each program given to these farmers right on target (SO2).
3. Development of plantation-based agro industry and creating derivative products through collaboration with the private sector and other parties (S3, O3, O4).

S-T Strategy (Quadrant II):

1. Strength honing policies so that plantation development does not damage the environment (S1, T1).
2. Optimizing guidance from related counselling on the use of appropriate cultivation techniques in accordance with climate change and increasing productivity (S2, S3, T2, T4).
3. The role of local government in balancing the selling price of plantation commodities (S2, T3).

W-O Strategy (Quadrant III):

1. Increased farmers' access to financial institutions to help farmers provide solutions to financial constraints (WO1).
2. Central government support to help meet accessibility development for easy access to markets (W2, O2).
3. Program to improve management capabilities and mastery of technology for farmers (W4, O3, O4).

W-T Strategy (Quadrant IV):

1. Conduct supervision in the development of Smallholding plantation so that forest fires do not occur which can damage the ecosystem of the environment (W1, T1)
2. Maintain price stability so as not to be playing by the market mechanism (W2, T3).
3. Building an environmentally friendly processing industry (W3, T1,T2).

The strategy for developing smallholding plantation commodities in West Aceh Regency needs to pay attention to the results of the analysis of the external internal matrix and the space matrix. The results of the internal-external matrix analysis of the development of leading commodities of smallholding plantation in West Aceh Regency are in the cell position I and matrix space analysis shows the position of quadrant I. Referring to the results of the analysis for the development strategy of smallholding plantation commodities in West Aceh Regency using the strategy of aggressive strategy SO (Strengths-Opportunities).

S-O (Strengths-Opportunities) strategy is the development of strengths by taking advantage of opportunities. This strategy is very likely to be implemented considering that West Aceh Regency is currently one of the trade and service centre regency that is an attractive opportunity for investors to invest by cooperating with local governments to create processing factories to create added value to these commodities and expand the marketing network from existing smallholding plantation products. The existence of the processing industry is very important in developing leading commodities, especially in maintaining price stability. The existence of existing commodity-based processing industries must be used as a development agenda in developing leading commodities. According to [18] the role of extension agents, farmer groups and the availability of agricultural facilities and infrastructure are important in the framework of developing community plantations. Mentoring/counselling programs are needed by farmers in an effort to optimize land use to increase their plantation production so that it impacts on the farmers' economic growth.

IV.CONCLUSION

Based on the results of the research, smallholding plantation commodities can be obtained in West Aceh Regency, namely oil palm, rubber and coconut. The strategy for development smallholding plantation commodities is the strengths-opportunities strategy with the development of strengths by taking advantage of opportunities. Strengthening mentoring / counselling to farmers so that the potency of land use in providing input to the land can be carried out optimally so as to increase the production of the plantation. Strengthening the synergy between farmers, local and central government for each program given to farmers is right on target. Development of plantation-based agro industry and creating derivative products through collaboration with the private sector and other parties is needed.

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