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# Development Strategy of The Virgin Coconut Oil Industry and Coconut Farmers Partnership System in Padang Pariaman Regency

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**Abstract** Coconut is a superior commodity in Padang Pariaman Regency, which is spread in almost all districts. The area of the plantation of coconut is 40755 ha, with the level of productivity of 1,363 tons/ha are cultivated by 97094 farming families. The purpose of this study is to formulate a VCO industry development strategy and a partnership system for coconut farmers in Padang Pariaman area, that designed with a system approach through the integration of the coconut farming sub-system and coconut processing sub-system to maximize the profits from the coconut farming business and ensure the fulfillment of capacity VCO production. Determination of the VCO industry development strategy using SWOT analysis techniques. The strategy that can develop is a growth strategy through horizontal integration, namely establishing a partnership between the VCO industry and coconut farmers as suppliers of raw materials to ensure smooth production. The coconut farmer's partnership was designed through a systems approach using the Interpretive Structural Modeling method. The purpose of the partnership system is to increase mutual trust and mutual benefit between industry and coconut farmers and the consistency of farmers in planting coconuts supported by local government regulations on partnerships and the availability of funds.

**Keywords:** VCO, SWOT, AHP, Partnership, ISM

## 1. Introduction

Coconut is a farming people and owned by the house stairs farmer on agroecosystem plains low to moderate in West Sumatra [9]. Coconut is a superior commodity in Padang Pariaman Regency, which is spread in almost all districts. The area of the plantation of coconut is 40755 ha, with the level of productivity of 1363 tons/ha cultivated by 97094 farmers [1].

Coconut is a superior commodity in Padang Pariaman Regency, which is spread almost in all districts. Potential oil that no time supposed to be a chance district of Padang Pariaman to improve the industry downstream through the development of agro-industries in rural areas. The development of the industrial countryside will create a field of work recently in the countryside so that the economy of the community will be increased [11].

Coconuts produced by farmers are not only sold as primary products but are processed first into secondary products such as virgin coconut oil. Therefore, the development of coconut agro-industry becomes very important because of its potential to improve the community's economy. Agro-industry has a high multiplier effect in creating jobs and increasing product value. The development of coconut

agro-industry expected to be able to grow the motivation of farmers in Padang Pariaman Regency to increase the productivity of coconut farming and stimulate the growth of rural industries so that improving the welfare of coconut farmers can be achieved [15].

The availability of raw materials influences smooth production. Partnerships are one way to increase production and thus expected to increase farmers' productivity and income. The partnership will combine weaknesses and strengths owned by farmers and industry. A smooth partnership will increase the transfer of knowledge, capital, and technology from the industry so that the bargaining position and income of farmers can increase [17].

The purpose of this study is to formulate a VCO industry development strategy and a partnership system for coconut farmers in Padang Pariaman area, that designed with a system approach through the integration of the coconut farming sub-system and coconut processing sub-system to maximize the profits from the coconut farming business and ensure the fulfillment of capacity VCO production.

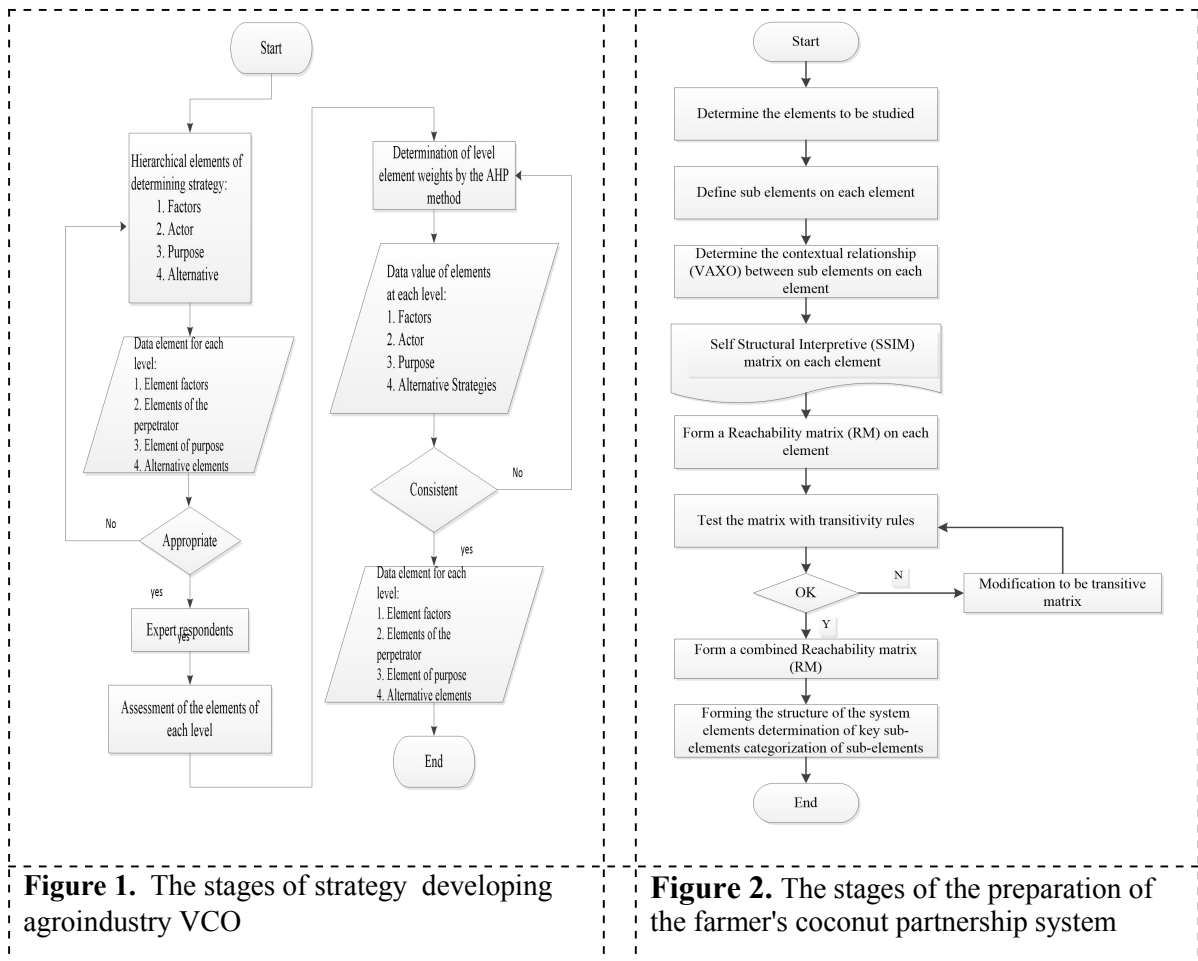
## **2. Methods**

### *2.1. VCO Agroindustry Development Strategy*

Determination of the VCO agroindustry development strategy using SWOT analysis techniques. That is done to get the best strategy that can be taken based on Strength, Weakness, Opportunity, and Threats from the VCO agroindustry. Through the analysis of SWOT, the position of agroindustry VCO can be known that some of the strategies best be taken by decision making by utilizing the strengths and overcome the weaknesses that owned the company. Analysis of the strategy development of agroindustry VCO is then followed by using a technique AHP to determine the order of priority of the strategy development of the previously obtained from the analysis of SWOT. Stages determination of strategy developing agroindustry VCO presented in Figure 1.

### *2.2. The Coconut Farmers Partnership System*

System partnership coconut people designed by the approach of the system by using the method of Interpretive Structural Modeling (ISM). Aims to get a model structure that will portray the complexity of the system partnership coconut folk. According to Saxena (1992), there are eight elements of structuring the system that can be analyzed, namely (1) elements of the goal of developing coconut farmers' partnerships, (2) elements of partnership development needs, (3) elements of the main constraints to developing partnerships, (4) elements of success measurement measures, (5) elements of the activities needed for the development of partnerships, (6) elements of the main elements of agency actors in developing partnerships, and (7) elements of the desired change elements, and (8) elements of sector elements a society that can influence. Stages of preparation of system partnership coconut folk presented in Figure 2.



### 3. Result and discussion

#### 3.1. Analysis of Determination of VCO Agroindustry Development Strategy

The initial stage is to identify internal and external factors based on strengths, weaknesses, opportunities, and threats. Furthermore, weighting the internal strategic factors and external strategic factors in the SWOT analysis is done by pairwise comparisons while determining the rating factor is done with a scale range of 1 to 5. Experts also give the weighting by filling out the questionnaire. The results of the Internal Factor Evaluation (IFE) weighting and the External Factor Evaluation (EFE) results can be seen in Table 1 and Table 2.

**Table 1.** Internal factor e valuation (IFE)

Internal Strategic Factors	Weight	Rating	Weight * Rating
<b>Strength</b>			
Availability of material raw that many	0.19	3	0.57
Personnel working locally are reasonably available	0.152	3.33	0.506
VCO market availability	0.097	3	0.291
Supported by government policy	0.034	3	0.102
Technology that is relatively easy	0.08	3	0.24
<b>Weakness</b>			
Scale businesses that do relatively little	0.124	3.33	0.412
The level of public education is still low	0.091	2.33	0.212
Transportation facilities and infrastructure are not very supportive	0.059	2.67	0.157
Community technology mastery is still low	0.056	2	0.112
Lack of access to market information	0.034	2	0.068
Limited capital	0.029	2.67	0.077
Southwestern competitiveness was low, only limited to local village and sub-district	0.104	2	0.208
<b>Amount</b>	<b>1</b>		<b>2.95</b>

**Table 2.** External factor evaluation (EFE)

Internal Strategic Factors	Weight	Rating	Weight * Rating
<b>Opportunities</b>			
Through the development of the agroindustry VCO, it will increase people's income, increase business opportunities and employment	0.26	3	0.78
There is still a small amount of processing industry and utilization of VCO	0.15	3	0.45
The economy of communities which increasingly increases	0.11	3	0.33
Total population of the increasingly rising	0.11	2.67	0.293
<b>Threats</b>			
Uncertainty of coir prices	0.14	2.33	0.326
Products still dominate the market made from raw synthetic	0.09	2.33	0.021
The absence of a strong business partnership	0.1	3	0.3
Weather change	0.04	2.33	0.093
<b>amount</b>	<b>1</b>		<b>2.59</b>

Based on the IFE and EFE matrices in the table above, the VCO agroindustry is in position (2.95; 2.6). An internal-external matrix developed with parameters that include the company's internal strengths and external influences faced; the aim is to obtain a more detailed business strategy at the

corporate level. The VCO agroindustry position based on the Internal-External matrix is in the cell five positions.

The strategy that can be developed through matrix internal-external if the company is in the position of cell 5 is a strategy of growth through the integration of horizontal. Companies that are in the cell can expand the market, the facilities of production, as well as the technology with the development of internal or externally through cooperation (joint venture) with the company of others. It can be implemented in agroindustry VCO with a way to establish partnerships with growers of coconut as a supplier of materials raw to ensure the smooth supply of oil. That is possible to be done by establishing a VCO industry in partnership with coconut farmers in Padang Pariaman District.

### 3.2. Coconut Farmers Partnership System

Eight elements of farmer partnership are used in building a partnership structure for coconut farmers; namely, (1) the objective elements of the partnership system, (2) the elements of partnership development needs, (3) the main obstacle elements of partnership development, (4) the benchmark element of the Success element, (5) elements of the activities needed to develop partnerships, (6) elements of the main institutional actors in partnership development, (7) elements of the desired change elements, and (8) elements of the affected community sectors.

Based on the analysis of the structuring of the partnership system for developing coconut farmers, a key sub-element determined as a guideline in designing the structuring of the system for developing partnerships of coconut farmers in Padang Pariaman, which is present in Table 3.

**Table 3.** Structuring the system for developing a partnership of coconut farmers in Padang Pariaman Regency

No.	Element	Sub element
1	The purpose of developing partnerships	Increase a sense of mutual trust and mutual benefit between agroindustrial and coconut farmers (E-1) Build a system for the results of the fair (E-2) Get a certain supply of coconut (E-3)
2	Partnership development needs	Local Government Regulation on partnerships (E-1) Availability of funds (E-2) Availability of technology appropriate to (E-3) Availability of human resources and superior seeds (E-4)
3	The main obstacle to developing partnerships	Low level of human resources skills (E-1) Limited facilities and infrastructure (E-2) Partnership culture not yet developed (E-3) Local government regulations regarding partnerships have not yet developed (E-4)
4	Benchmarks measuring success	Increased sense of mutual trust and mutual benefit between the farmer with the industry (E-1) Availability of the amount of supply of coconut which grade (E-2)

		Consistency of farmers in planting coconuts (E-3) Increased business actor income (E-4) Increased VCO production (E-5)
5	Activities that are needed for the development of partnerships	Preparing land and superior coconut seeds (E-1) Government regulations to support partnerships (E-2)  Institutions involved in partnership (E-3) Training technology of cultivation (E-4)
6	The main actors in the development of partnerships	Agroindustry VCO (E-1) Coconut Farmers Association (E-2) Local government and related institutions (E-3) Capital finance institutions (E-4)
7	The changes are desired	A sense of mutual trust and mutual benefit between farmers with industrial oil VCO (E-1) The pattern of coconut cultivation by GAP ( <i>Good Agriculture Practice</i> ) (E-2) VCO production process by GMP ( <i>Good Manufacture Practice</i> ) (E-3) The knowledge and skills of business (E-4)
8	Sectors of society are affected	Coconut farmers (E-1) Processing industry (E-2) Peoples around the industry established (E-3) Capital lending institutions (E-4) Local government and related institutions (E-5)

The purpose of the partnership system is to increase mutual trust and mutual benefit between agro-industries and coconut farmers. The partnership development needs are local government regulations on partnerships and availability of funds, the main obstacle to developing partnerships is that local government regulations on underdeveloped partnerships and limited facilities and infrastructure, benchmarks of success are increased mutual trust and mutual benefit between farmers and industry. The consistency of farmers in planting coconuts, activities needed for developing partnerships are preparing land and superior coconut seedlings and training in cultivation technology, The main actors involved in developing partnerships are the VCO agro-industry and the coconut farmers association, the desired change is mutual trust and mutual benefit between farmers and the VCO coconut industry, the affected sectors are coconut farmers and the processing industry.

#### 4. Conclusion

Determination of the *VCO* agroindustry development strategy using *SWOT* analysis techniques. From Matrix Internal-External, which acquired the company is in the position of cell five to apply a strategy of growth through the integration of horizontal through the expanded early market, the facilities of production, as well as cooperation with the company of others. It can be implemented in agro- *VCO*

with a way to establish a system of partnership with coconut farmers as suppliers of materials raw to ensure the availability of coconut supplies.

The purpose of the partnership system is to increase mutual trust and mutual benefit between agro-industries and coconut farmers and the consistency of farmers in planting coconuts supported by local government regulations on partnerships and the availability of funds.

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