IOSR Journal of Business and Management (IOSR-JBM)
e-ISSN: 2278-487X, p-ISSN: 2319-7668. Volume 20, Issue 5. Ver. VIII. (May. 2018), PP 86-91
www.iosrjournals.org

Potential And Development Strategy Of Cocoa Agroindustry In Southeast Sulawesi

Rosmawaty [1 *,] Ima Astuty Wunawarsih [2,] Bahari [3,] Wa Ode Yusria
Faculty of Agriculture, Department of Agribusiness Universitas Halu Oleo,
Kendari, Southeast Sulawesi, Indonesia
Corresponding Author: Rosmawaty

Abstract. *This study aimed to analysis the potential and problems of agro-industry development as well as men st rate gi formulated cocoa agro-industry development production area of raw materials. The method used is a qualitative method and quantitative. A lat analysis used is Descriptive analysis and Analysis Hierarchy Process (AHP). The study population was all the direct perpetrators and not directly related to the development of agro-cocoa in Southeast Sulawesi. Sampling was done by purposive sampling or intentionally election with consideration of respondents are directly involved actors and experts who are deemed to have the ability and understanding of problems related to cocoa agro-industry.*

The research result is a huge potential for agro-industries have not been fully able to be realized by efficient and effective, so s Strategy agro-industry development of cocoa which needs to be done disentra production of raw materials is developing agro-industries that exist in the LEM Sejahtera, in the form of units Enterprises Cocoa Processing Fermentation (UPKF) with the priority goal of increasing the added value supported capital condition as a priority factor which cocoa farmers as actors key.

Keywords: *Potential, Strategy, agro-industry Development, cocoa*

Date of Submission: 20-05-2018 Date of acceptance: 02-06-2018

I Introduction

Commodity of cocoa (Theobroma cacao L.) is a plant crop that has a significant role in the national economy, especially as a provider of employment, sources of income, and foreign exchange. In addition, cocoa also plays a role in the development of agro-industry. Developing agro-industry is one option to be considered, because it can provide various advantages such as: 1) give higher added value; 2) increasing the income of the smallholders; 3) make the product form durable; 4) can save and utilize the harvest; 5) give higher profits to compete; 6) can expand employment (Azis, 1993; Sinaga and Susilowati, 2007; Indrawanto, 2008).

Problem commonly encountered in the development of agro-industry in Southeast Sulawesi cocoa is very large agro-industrial potential has not been fully able to be realized in efficient and effective manner. This condition is due to the quality and continuity of raw materials, limited capital resources, technological barriers and lack of institutional effectiveness that have not been able to carry out strategic functions.

The state of institutions owned by Indonesia today is usually very partial, small-scale, have limited capital, and weak social partnership so as not to have the competitiveness and strength to fight the various problems encountered. Strong public institutions will be able to overcome the obstacles faced by cocoa farmers, especially in the face of pressure from the mafia cocoa always forcing farmers to sell their cocoa in the form of unfermented. Therefore, a Community Economic Institution (LEM) Sejahtera was established in 2009 to instill a fermentation culture to the people, so that in the future Indonesia will no longer sell quantity but sell quality of cocoa. Prosperous LEM is the only institution that does the village of fermentation activity.

One is the LEM Sejahtera Tinete established in the village Tinete since 2010 is formed of, by and for rural communities. LEM Prosperous Tinete in the business development of cocoa bean fermentation experience various obstacles both internal and external constraints, ranging from obscurity price of cocoa beans, obscurity company receiving cocoa beans fermentation, high pests and diseases that result in increased maintenance costs and decrease in the results, to constraints of labor resources. Referring to the facts and phenomena described above, it is necessary an integrated and comprehensive assessment of the potential and cocoa agro-industry development strategy in the Southeast.

II Research Method

The location of this study was conducted in Southeast Sulawesi Province, that is in East Kolaka Regency. Determination of research location is determined purposively with consideration of cocoa production center area in Southeast Sulawesi province.

The objects of this study are actors (stakeholders) cocoa business development, namely the direct perpetrator (cocoa farmers in the container LEM Sejahtera) and indirect actors (local government and relevant cross-sectoral agencies). Selection of the sample (respondents) was done by purposive sampling or intentionally election. Determination expert (respondents) with research informants have one representative out of 5 stakeholders. Data used in the study i ni consists of two types: Primary data, that is data obtained through discussions and depth interviews using quetionaire that has been provided, and secondary data namely data obtained through the Office of Southeast Sulawesi Plantation and Horticulture, Department of Industry and Trade of Southeast Sulawesi, Central Bureau of Statistics (BPS), and a review of the literature relevant to the substance of the research. Data collection method in this research is done by library study method and field survey.

The variables in this study included: actor component is a cocoa farmer, manager of LEM Welfare, Local Government and the din as plantation and horticulture, banks, universities and R & D. Component factor is the availability of human resources, mastery of technology, raw material potential, the potential and market opportunities, infrastructure, business climate, and capital. Components of agro-industry development goal is to increase added value, enhancing competitiveness, increasing revenues, expanding employment and reduce pollution of agro-industrial waste. Cocoa agro-industry development strategy components adal ah establishing new agro-industry, develop agro-existing and develop institutional agro-industries.

Analysis data used Analytical Process Hierarchy (AHP) methods and descriptive analysis. The calculation procedures in the strategy of development of agro-cocoa follow the rules of AHP (Marimin, 2004) with the following steps: a) preparing hierarchy (focus, actors, factors and objectives), b) an assessment ratio of each element, c) matrix of individual opinion, d) matrix opinions joint, f) horizontal processing, g) processing vertical and h) the revised opinion, can be done if the value of the ratio inconsistency think is quite high (> 0.1).

III Result And Discussion

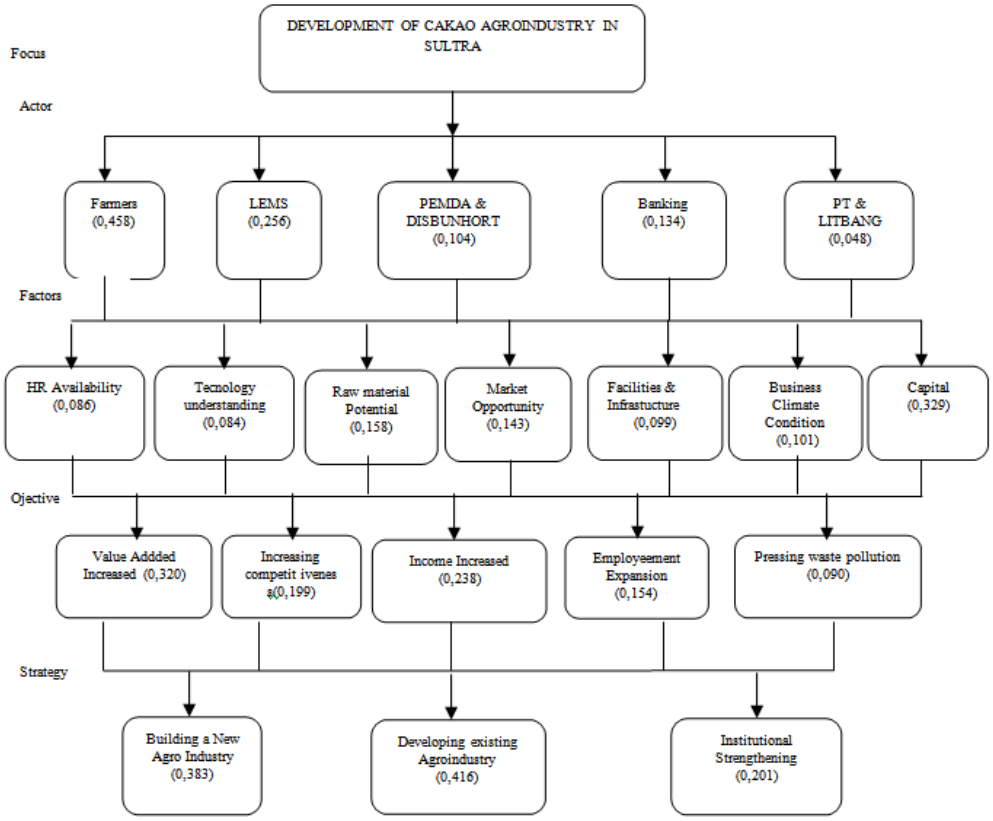
The potential of cocoa agro-industry development in LEM Sejahtera Tinete is: a) Availability of land / land, b) Availability of fertilizer, c) Availability of seeds, d) Availability of labor, e) Availability of business equipment, f) Productive farmer age, g) Good, and h) High government support. The current cocoa potentials in Tinete are 1,500 hectares of land producing and 30 hectares of new land. This is an accumulation of cocoa farmers' land belonging to the LEM Sejahtera Tinete. In addition, LEM Sejahtera Tinete also obtained cocoa seeds from their own nursery business. In the provision of saprodi activities, LEM Sejahtera Tinete has been able to assist members in providing fertilizer in cooperation with one shop outside the village. Currently LEM Sejahtera Tinete is exploring cooperation with Petro Chemical fertilizer distributor to become a fertilizer retailer. For fermentation cocoa production facilities, LEM Sejahtera has also obtained equipment from several parties such as private or government companies consisting of fermentation chests, drying floors and drying equipment or para-para and warehouses.

The problems of cocoa agro-industry development by LEM Sejahtera Tinete are: a) Limited capital, b) Low quality of raw material, c) Low level of farmer education, d) unorganized marketing, e) Minimal extension intensity, f) Less integrated system, G) Production time is too long, and g) difficult fermentation process. The limitation of business capital is also the reason for the inhibition of fermentation activities, to overcome the problem now people use LEM Sejahtera role strategy to become the savings and loan business of all members of LEM Sejahtera. Farmers who do not enter as members of LEM Sejahtera can not make loans or savings. The main requirement to become a member of LEM Prosperous namely; Is a resident of the village where LEM Sejahtera is located, does not belong to a political party, civil servant, or village apparatus, and is domiciled in the village of LEM Sejahtera location for at least two years.

Constraints LEM Prosperous Tinete also found in the difficulty of fermentation activities is also a reason why farmers do not do cocoa fermentation. If there is one to eight cocoa beans are not fermented or unfermented categories in 100 grams of the cocoa excluding cocoa fermentation. This standard is considered to be very heavy for farmers. In addition, the fermentation process must also obtain good control, if the fermented cocoa over some hours of fermentation, the cocoa beans are categorized as unfermented. Need a good strategy to develop cocoa fermentation cocoa beans business by LEM Sejahtera Tinete.

The results of the combined analysis of expert opinion in the assessment of cocoa agro-industry development resulted in a strategy of developing cocoa agro-industry in Southeast Sulawesi based on actors, factors, objectives and alternative strategies. The results of the combined hierarchical analysis of expert opinions vertically can be explained in Figure 1

Figure 1. AHP Results Vertically Model Development of Cocoa Agro-industry in Southeast Sulawesi



The results of the combined analysis of expert opinion vertically resulted in the decision on the order of priority of the actor, the main priority is the farmer actor with a weight value of 0.458. The second priority with the weight value of 0.256 on the LEM Prosperous actor. The third priority is the banking actors with a weight value of 0.134, and the fourth priority is the actors and Disbunhorti Pemda with a weight value of 0.104, while the actor who became the last priority is the fifth with a weight value of 0.048 is PT and Litbang. AHP results with a consistency requirement of less than 0.1, the combined result of expert opinion for the actor yields a consistency value of 0.02, the consistency value of 0.02 is smaller than 0.1 so it can be said to have fulfilled the consistent requirements of the opinion of the experts in judging the actor .

The result of hierarchy on the factor yields a weighted value with seven priority sequences, based on the combined assessment of the five experts producing the most important priority in the hierarchy of factors ie capital conditions with a weight value of 0.329. The second priority with the weight value of 0.158 is the potential factor of raw materials. The third priority with the weight of 0.143 is the market opportunity factor. The fourth priority with a weight value of 0.101 is on the business climate conditions. The fifth priority with a weight value of 0.099 is the factor of facilities and infrastructure. Priority sixth and seventh with a weight value of 0.086 and 0.084 on the availability of human resources and mastery of technology. From the AHP result with the consistency requirement of less than 0.1, the combined result of five experts for the actor yields a consistency value of 0.03, the 0.03 consistency value is smaller than 0.1 so it can be said to have satisfied the consistent requirements of the 5 experts in assessing the factor .

Based on the AHP results it is known that the main factor to be considered in the cocoa agro-industry development program is the capital for cocoa agro-industry development. Furthermore, the availability of raw materials for production processes and market opportunities for products produced and supported by good business climate conditions. In addition to these four main factors still require the support of other factors such as facilities and infrastructure, the availability of human resources and technology mastery. According to Syam (2006), the key factors to be considered in achieving the cocoa agro industry's development objectives are market prospects, raw material guarantees, skilled human resources support in the village, and ease in accessing tools and technology.

The result of hierarchy on goal yields a weighted value with five priority sequences, based on the combined assessment of the five experts producing the most important priority in the goal hierarchy that is the increase of added value with the weight value of 0.320. The second priority with a weight value of 0.238 that is

on the purpose of increasing revenue. The third priority with a weight value of 0.199 on the purpose of increasing competitiveness. The fourth priority with a weight value of 0.154 on the purpose of expansion of employment. And the fifth priority with a weight value of 0.090 is on the goal of suppressing waste pollution. From AHP results with a consistency requirement of less than 0.1, the combined result of five experts for the actor yields a consistency value of 0.05, a 0.05 consistency value smaller than 0.1 so it can be said to have satisfied the consistent requirements of 5 experts in assessing the objectives .

Alternative hierarchy results in weighted values with three priority sequences, based on a combined assessment of the five experts producing the most important priority in the hierarchy of strategy of developing an existing agro-industry with a weight value of 0.416. The second priority with the weight value of 0.383 is to build new agro-industry and the third priority with the weight value of 0.201, namely institutional strengthening. AHP results with a consistency requirement of less than 0.1, combined results of five experts for the actor produces a consistency value of 0.02, 0.02 consistency value smaller than 0.1 so it can be said to have complied with the consistent requirements of 5 experts in assessing the strategy. The hierarchy of analysis of the major components of cocoa agro-industry development is summarized in Table 1.

Table 1. Hierarchy of the main components of cocoa agro-industry development.

No	Description		Weight	Priority
11	**Focus: Development of cocoa agro-industry**		1,000	1
22	**Actor:**		0.458	1
	1.	Cocoa Farmer	0.256	2
	2.	LEMS	0.104	3
	3.	Banking	0.134	4
	4.	Local Government and Disbunhorti	0.048	5
	5.	PT and R & D		
33	**Factor:**		0.329	1
	1.	Capital	0.158	2
	2.	Potential of Raw Materials	0.143	3
	3.	Market opportunity	0.101	4
	4.	Conditions of Business Climate	0.099	5
	5.	Facilities and infrastructure	0.085	6
	6.	Availability of human resources	0.084	7
	7.	Mastery of Technology		
44	**Aim :**		0.320	1
	1.	Increase in Added Value	0.238	2
	2.	Increased revenue	0.195	3
	3.	Increasing competitiveness	0.154	4
	4.	Expansion of employment	0.090	5
	5.	Suppress waste pollution		
55	**Alternative**		0.383	2
	1.	Build agro-industry	0.416	1
	2.	Developing existing agroindustry	0.201	3
	3.	Institutional Development		

The result of horizontal analysis when viewed from the actors who play a role in the development of cocoa agro-industry shows that farmers, management managers LEMS, and banking are actors in the development of agro-industry. Therefore, the priority is capital. Because capital is a priority in the development of agro-industry, the source of funds other than self-financing also comes from bank loans. Furthermore, local governments and related agencies prioritize the provision of facilities and infrastructure, while PT and Litbang prioritize the availability of qualified human resources. The results of the horizontal analysis can be seen in Table 2.

Table 2. Priority factors that determine the development of cocoa agro industry in Southeast Sulawesi.

Factor	Actor				
	Farmers	Lems	Local Government & Disbunhorti	Bank	Pt & R & D
Availability of tbsp	0.076	0.051	0.107	0.107	0.260
Mastery of technology	0.073	0.069	0.108	0.079	0.239
Potential of raw materials	0.185	0.194	0.082	0.059	0.156
Market opportunity	0.129	0.165	0.128	0.168	0.124
Infrastructure	0.081	0.058	0.348	0.059	0.067
Conditions of business climate	0.058	0.105	0.177	0.178	0.100
Capital	0.399	0.357	0.049	0.350	0.055
Inconsistency	0.030	0.030	0.080	0.020	0.020

The result of AHP analysis when viewed from the objectives achieved in the development of cocoa agroindustry in Southeast Sulawesi indicates that the priority of increasing value added is supported by the availability of human resources, the potential of raw materials, the mastery of technology, the condition of business climate, facilities and infrastructure and capital. The results of the analysis in more detail can be seen in Table 3.

Table 3. Priority of cocoa agro-industry development objectives in Southeast Sulawesi.

Objective	Factor						
	Availability of tbsp	Mastery of technology	Potential raw materials	market opportunity	infrastructure	Business climate conditions	Capital
Value-added	0.455	0.412	0.447	0.259	0.158	0.110	0.339
Increasing competitiveness	0.133	0.085	0.234	0.169	0.398	0.283	0.155
Increased revenue	0.220	0.260	0.085	0.397	0.195	0.175	0.273
Expansion of Employment	0.117	0.109	0.148	0.094	0.156	0.340	0.147
Suppressing Pollution	0.075	0.134	0.085	0.082	0.094	0.093	0.086
Inconsistency	0.080	0.010	0.020	0.020	0.010	0.010	0.010

Based on the objectives to be achieved in the development of cocoa agroindustry in Southeast Sulawesi, which is linked with alternative cocoa agro-industry development strategy, the result of AHP analysis horizontally obtained various strategies. The results of the horizontal analysis can be seen in Table 4.

Table 4. Priority of cocoa agro-industry development strategy in Southeast Sulawesi.

Strategy	Aim				
	Value-added	Increasing competitiveness	Increased revenue	Expansion of Employment	Suppressing Pollution
Building a New Agro Industry	0.347	0.333	0.430	0.528	0.249
Developing existing Agroindustry	0.502	0.331	0.356	0.333	0.594
Institutional Strengthening	0.151	0.336	0.213	0.140	0.157
Inconsistency	0,000	0,000	0.020	0.050	0.050

If the goal to be achieved is to increase added value and reduce waste pollution, the priority of strategy is to develop existing agroindustry. If the goal is to improve competitiveness, the strategy is institutional strengthening, while the objective for increasing income and expansion of employment with new agro-industry development strategy.

IV Conclusion And Suggestion

Conclusion

Based on the results of the research, it can be concluded that: 1) the potential of agro-industry is very large not fully able to be realized in a useful and effective. 2) cocoa agro-industry development strategy that needs to be done in the production of raw materials is to develop existing agro-industry in LEM Sejahtera in the form of Fermented Cocoa Processing Business Unit (UPKF) with priority of purpose of increasing added value supported by capital condition as priority factor where cocoa farmers as key actors .

Suggestion

Some of the things that can be suggested from the results of this study are:

1. For farmers need to build a joint commitment to ensure the availability of raw materials of cocoa beans ferment in accordance with quality requirements on Indonesian National Standard (SNI).
2. For the perpetrators of agro-industry in order to establish a partnership with a private company with the principles of benefit and sustainable principles.
3. For related offices especially the plantation and horticulture services to provide guidance and supervision from the process of cultivation, processing to marketing.
4. For the government to seek improvement of human resources, financing facilities, facilities and infrastructure and sanction for industries or exporters who buy non fermented cocoa beans.
5. For the next researcher to be able to do research on cocoa agro-industry development planning in more detail, both related to its implementation and also the area which become the target of its development.

References

[1]. Badan Standardisasi Nasional Indonesia. 2008. Biji kakao rancangan standar nasional Indonesia. Jakarta: SNI 01-2323-2008.
[2]. Hasibuan dkk. 2012. Analisis kebijakan pengembangan industri hilir kakao (Suatu Pendekatan Sistem Dinamis). Jurnal Informatika Pertanian, 21(2) : 59-70
[3]. Indrawanto, C. 2008. Penentuan pola pengembangan agroindustri untuk tanaman Jambu Mente. Jurnal Littri, 4(2) : 78-86.
[4]. Marimin, 2004. Teknik dan aplikasi pengambilan keputusan. Keriteria majemuk. Jakarta: Penerbit PT Grasindo.
[5]. Mulato S dan Suharyanto E, 2010. Pengolahan produk primer dan sekunder kakao. Kumpulan Hasul Riset. Pusat Penelitian Kopi dan Kakao Indonesia.
[6]. Saaty.T.L, 1993. Pengambilan keputusan bagi para pemimpin, Proses Hierarki Analitik untuk pengambilan keputusan dalam situasi yang kompleks. Pustaka Binaman Presindo. Jakarta.
[7]. Sinaga, B.M dan Susilowati, S.R, 2007. Dampak kebijakan ekonomi di sector agroindustri terhadap distribusi pendapatan sektoral, tenaga kerja dan rumah tangga di Indonesia. Jurnal Agro Ekonomi, 25 (1) : 11-36.
[8]. Supriyati, 2006. Peran, Peluang dan Kendala Pengembangan Agroindustri di Indonesia. Pusat Analisis Sosial Ekonomi dan Kebijakan Pertanian. Bogor
[9]. Syam, 2006. Rancang bangun model sistem pengembangan agroindustri berbasis kakao melalui pola jejaring usaha. (disertasi). Bogor: Program Pascasarjana Institut Pertanian Bogor.

Rosmawaty. " Potential And Development Strategy Of Cocoa Agroindustry In Southeast Sulawesi." IOSR Journal of Business and Management (IOSR-JBM) 20.5 (2018): 86-91.