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Submission date: 08-Feb-2023 03:40PM (UTC+0700)

Submission ID: 2009209680

File name: C8_Development_strategy_of_coffee_agribusiness.pdf (523.77K)

Word count: 4102

Character count: 21811

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To cite this article: Summase *et al* 2020 *IOP Conf. Ser.: Earth Environ. Sci.* **486** 012025

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Development strategy of coffee agribusiness

I Summase¹, A N Tenriawaru¹, N M Viantika¹, A Amrullah¹, M Arsyad¹,
A Amiruddin¹, A B Hadman¹ and M Arhim²

¹Department of Socio-Economic of Agriculture, Faculty of Agriculture, Universitas Hasanuddin, Jalan Perintis Kemerdekaan KM 10, Makassar (90245), Indonesia

²Universitas Sulawesi Barat, Indonesia

E-mail: idrissummase@yahoo.com

Abstract. This study aims to determine the coffee agribusiness development strategy in Benteng Alla Utara Village, Baroko District, Enrekang Regency. The number of sample farmers taken was 24 coffee farmers by simple random sampling. The data obtained were analyzed using SWOT (Strengths, Weakness, Opportunities, Threats) by looking for internal and external factors in the coffee agribusiness system in Benteng Alla Utara Village, then designing an appropriate strategy for coffee agribusiness development. The results showed that there were 4 strategies in developing coffee agribusiness in this region, namely by taking advantage of market opportunities, increasing the promotion of coffee products typical of the Benteng Alla Utara, Proposing the help of coffee processing equipment and machines by utilizing existing farmer groups and undertaking rejuvenation and maintenance activities of coffee plants by intensive.

1. Introduction

Coffee is a major tropical commodity that is traded throughout the world with the contribution of half of the total exports of tropical commodities. Products beverages with the essential ingredients of coffee bean extract consumed around 2.25 billion glasses every day throughout the world [1,2]. Coffee cultivated between 2001 and 2017, the majority of Robusta coffee types reached 81.96% or reached an average area of 1.04 million hectares, while Arabica coffee only reached an average area of 228.71 thousand hectares or 18.04 shares % of the total area of Indonesian coffee. The level of domestic coffee consumption based on the results of the 1989 UI LEPM survey was 500 grams/capita/ year. Efforts to improve coffee productivity and quality continue to be done so that the competitiveness of coffee in Indonesia can compete in the world market [3]. The agricultural and plantation sector not separated from the utilization of resources has value to meet an increasingly diverse of human needs [4]. South Sulawesi is one of the provinces in Eastern Indonesia that has the potential to develop coffee. This is indicated by a fairly extensive planting area and a very supportive agro-climatological situation. This production is spread in almost all districts/cities in South Sulawesi Province with five central regions dominating, namely the largest in Enrekang Regency which contributes 38.93% or production of 7.92 thousand tons, Enrekang Regency has districts that produce high coffee production, namely District Baroque. Benteng Alla Utara is a village in Baroko subdistrict is a type of arabica coffee production type from the past until now, has a distinctive aroma and high taste.



2. Methods

This research was conducted in the village of Benteng Alla Utara, Baroko District, Enrekang Regency. The selection of research locations was done intentionally or purposive sampling with the consideration that in Enrekang District Baroko Subdistrict, Benteng Alla Utara Village is the center of coffee development in Enrekang Regency. The analysis used was a SWOT analysis, and data were obtained from coffee farmers in Benteng Alla Utara Village. The number of hamlets in Benteng Alla Utara Village is six hamlets and each hamlet there are farmer groups with the number of farmer groups in Benteng Alla Utara Village there are 20 farmer groups that selected six farmer groups representing each village. The sampling technique used is a probability sampling technique, which is to choose one farmer group per village. So the total number of members in the six groups there are 120 people and 20% of the 120 people selected for the sample are 24 farmers by taking four farmers each group randomly.

2.1. SWOT Analysis

SWOT analysis is carried out to analyze the internal factors and the entrepreneurs in the industrial area so that it is known what the strengths and weaknesses are. Besides analyzing internal factors, external factors were also analyzed to determine opportunities and threats faced in the development of coffee agribusiness in the District of Baroko, Enrekang District. Based on the results of the SWOT analysis, selected policy alternatives were obtained in making strategic decisions [5]. Following are the steps in preparing a SWOT Matrix:

- Determine the key internal strengths and weaknesses of Indonesia's coffee agribusiness.
- Determine the opportunity factors and external threats of Indonesian coffee agribusiness.
- Determine the strengths, weaknesses, opportunities and strategic threats of Indonesia's coffee agribusiness.
- Adjust internal strength with external opportunities to get SO Strategy.
- Adjust internal strength with external threats to get ST Strategy.
- Adjust internal weaknesses with external opportunities to get WO Strategy.
- Adjust internal weaknesses with external threats to get the WT Strategy.

	Strength (Strength)	Weakness
Internal factors	1. Upstream agribusiness system	1. Upstream agribusiness system
External Factors	2. On-farm agribusiness system	2. On-farm agribusiness system
	3. Downstream agribusiness system	3. Downstream agribusiness system
Opportunities	SO Strategy	WO Strategy
1. Upstream agribusiness system	Create a strategy that uses power to take advantage of the opportunities that each coffee agribusiness subsystem has in Desa Benteng Alla Utara	Create a strategy that minimizes weaknesses to take advantage of opportunities owned by each coffee agribusiness subsystem in the Benteng Alla Utara Village.
2. On-farm agribusiness system		
3. Downstream agribusiness system		

Threat (Threats)	ST Strategy	WT Strategy
1. Upstream agribusiness system	Create a strategy that uses power to overcome the	Create a strategy to minimize weaknesses and avoid
2. On-farm agribusiness system	that can occur in every coffee agribusiness subsystem in the	that can occur in each coffee agribusiness subsystem in
3. Downstream agribusiness system	Benteng Alla Utara Village.	Benteng Alla Utara Village.

Figure 1. SWOT analysis matrix of coffee agribusiness development

3. Results and discussions

3.1. Internal factors analysis of coffee farming

Internal factor analysis aims to find various strengths and weaknesses in coffee farming obtained from interviews and discussions by coffee farmers or respondents in Benteng Alla Utara Village Baroko District Enrekang Regency. These conditions cause people to try to improve their social status in the community [6].

3.1.1. *Strength.* Strength is an internal factor that exists in coffee farming that can be used to develop agriculture. These strengths are :

- a. Coffee quality. It has a distinctive aroma and taste. Which has been recognized at the national and even international level. Evidenced the marketing of coffee that has been distributed and has consumers until to the international level. Until the famous coffee company. Starbuck became an estor in the Benteng Alla coffee cooperative and provided coffee dryer assistance.
- b. The age of coffee farmers who are still productive. The age that is still productive influences farming activities. In Desa Benteng Alla Utara, farmers on average still have a productive age and a long farming experience. This makes coffee farming activities run smoothly and are still able to do work that can have a good effect on their coffee farming.
- c. Competent farmers. Farmers can gain knowledge and expertise through training and counseling provided by extension agents and from the agriculture service.
- d. High motivation of farmers. The high motivation of coffee farmers to work makes a strength for the sustainability of coffee farming in the village of Benteng Alla Utara, which be a factor in the development of coffee agribusiness to create an innovation and increase the standard of living of coffee farmers in the village of Benteng Alla Utara.

3.1.2. *Weakness.* Weakness is weak against something that can affect not suitable for farming activities. The weaknesses for the coffee agribusiness in the village of Benteng Alla Utara are :

- a. Age of old coffee plants. The coffee plantations of farmers in Benteng Alla Utara Village are relatively old and not very productive anymore because some old coffee trees have a plant age of up to 30 years which results in the fruit being produced that is not too dense. And it needs to be replaced again or rejuvenated.
- b. Results Coffee production is volatile and sometimes decreases. Low coffee yields result in farmers' incomes also decline. This decline in production occurs due to erratic weather such as the intensity of rain that occurs continuously resulting in coffee fruit is easily damaged, and the process of drying coffee becomes hampered so that many farmers complain that they don't get much harvest.
- c. Farmer's capital limitations. Many coffee farmers in Benteng Alla Village lack capital for maintenance costs, such as buying inputs for both inputs from fertilizer and coffee machine tools for the development of their coffee farms. The limited capital owned by farmers inhibits the desire of farmers to develop their coffee yields further to be sold in specialty coffee quality because they have to use expensive equipment and tools.

- d. ¹ Lack of technology owned by farmers for post-harvest activities ¹ Coffee farmers in Benteng Alla Utara village, on average, do not have the tools or machine technology for their coffee farming and do not use technology for post-harvest processing to process their coffee beans to the type of Green Bean coffee or the kind of coffee grate which is expensive. Coffee farmers only rely on sunlight for the drying process of coffee that has been harvested. But the problem that also occurs is the weather in Benteng Alla village which is erratic and high rainfall, resulting in the process of drying coffee is hampered.

Table 1. Internal factor evaluation matrix for coffee agribusiness development strategy

Internal strategy factors	Weight	Rating	Value
Strength			
Good quality coffee	0.25	4	1
Age of productive farmers	0.15	3	0.45
Competent farmers	0.10	3	0.3
High motivation of farmers	0.15	3	0.45
Total strength	0.55		2.2
Weakness			
Age of old coffee plants	0.15	3	0.45
Fluctuating coffee production results	0.08	2	0.16
Limited farmer capital	0.12	2	0.24
Lack of technology owned by farmers for post-harvest activities	0.10	2	0.2
Total weaknesses	0.45		1.05
Total	1		3.25

Table 1, provides information based on evaluation factors internal strategy (⁷strength), giving the highest weight lies in good coffee quality with a load of 0.25. The weighting on these factors is higher compared to other factors because they are considered the most influential on the development of coffee farming because if ⁹the quality of the coffee produced is good, the demand ⁷for coffee will increase and can increase the income of coffee farmers in Benteng Alla Utara Village. The total value of strength is 1. While in the internal strategy factor (weakness), the highest weighting is in the age of old coffee plants with a weight of 0.15. Giving a high weight and value following the value and rating and refers to the coffee agribusiness development strategy and the resulting value of 0.45. Based on the calculation of internal factor analysis (IFE), a total score of 3.25 was obtained. This value is above the average of 2.5 which indicates a sharp enough internal position which has above average ability in utilizing strengths and anticipating internal weaknesses [7].

⁶2. External factor analysis

External factors consist of opportunities and threats from coffee farming. Factor analysis of opportunities and threats obtained from interviews and discussions with respondents in this study.

¹ 3.2.1. *Opportunity.* The opportunity for the coffee agribusiness in the village of Benteng Alla Utara are :

- a. Availability of a broad market. The market becomes the most critical container in a business. Increased market opportunities can occur with a significant increase in the quality of coffee and coffee production and continue to occur. Will create high demand and create broad market opportunities. Benteng Alla coffee has good enough quality to be marketed overseas. Therefore Benteng Alla has the chance to reach the international stage.

- b. The number of coffee requests. Quality coffee will create a lot of demand from the market and consumers. Coffee is a trending drink among young people and coffee lovers. When the coffee produced has a distinctive taste and delicious aroma, of course, many consumers who want to try and drink coffee with a different flavor continuously.
- c. Cooperation. Social relations between coffee farmers in Benteng Alla Utara Village are quite good. Judging from the frequent activities of mutual assistance such as mutual assistance during pruning, maintenance and when harvesting coffee.
- d. The role of Farmer Groups. Farmer groups are an excellent opportunity for the development of farmers' coffee in Benteng Alla Utara Village. Which can provide a forum for farmers and farmer group members.

3.2.2. *Threat*. Threats are challenges that arise that can hinder the development of coffee farming. The threat comes from farming external factors that need to be aware of. The threats are:

- a. Transfer of land functions. One of the biggest threats to the cessation of coffee farming is the conversion of land from coffee plants to horticultural crops. In Benteng Alla Village itself, many coffee farmers have converted their land from coffee plants to horticulture. Many are reducing their coffee fields and replacing growing vegetables, because of several factors such as the economic factors of farmers who are less and the demand for school fees for their children. And when just waiting for the one-year-old coffee harvest will not be possible because the price of coffee is also unstable. So farmers are more likely to grow vegetables when they can be harvested.
- b. Competitor. The existence of a competitor is a threat to coffee marketing in Benteng Alla Utara Village. Various people are not responsible for selling the Alla Benteng brand, but the coffee he sells is not from Benteng Alla Utara Village.
- c. Pests and diseases. Pests and diseases that attack farmers' coffee cause crops to be damaged and damaged coffee fruit. Pests that often attack coffee are caterpillars, fruit flies and upas fungus that make the coffee tree slowly die. And one of the diseases that coffee farmers say is still very difficult to eradicate is the fungus upas that attacks the tree which causes the tree to die slowly and must be replaced and have an impact on production. These pests and diseases pose a significant threat to coffee farmers.
- d. Unstable Coffee Prices. The volatile price of coffee makes farmers complain, which results in a decrease in farmers' income because of uncertain coffee prices, which will affect the level of income of coffee farmers.

Table 2. Internal factor evaluation matrix for coffee agribusiness development strategy

External strategy factors	Weight	Rating	Value
Opportunity			
Availability of a broad market	0.20	4	0.8
Number of coffee requests	0.15	3	0.3
The mutual cooperation culture is still strong	0.13	2	0.26
The role of farmer groups	0.10	2	0.2
Total Opportunities	0.53		1.56
Threat			
Transfer of land functions	0.20	3	0.6
Competitor	0.12	2	0.24
Pest attack	0.10	2	0.2
Unstable coffee prices	0.15	2	0.3
Total threats	0.47		1.34
Total	1		2.9

Table 2 shows that giving the highest weight to opportunity is the availability of a broad market with a weight of 0.20 and with a value of 0.8. The rating of these factors is quite high when compared to other factors because they are considered the most influential and provide opportunities for farmers, namely the high coffee production of farmers because the availability of a broad market affects the level of demand for coffee and will increase farmers' incomes. The total score for the odds section is 1.56. While giving the highest rating on the threat lies in the transfer of land functions with a value of 0.6 and the total score is 1.34.

3.3. Internal matrix analysis - external (IE)

IE matrix is useful for displaying farm position in a schematic diagram or also called a portfolio matrix. The portfolio matrix consists of two dimensions: IFAS weighted total value, EFAS weighted total cost and consisted of nine cells. The IFAS weighted total value is placed on the x-axis and the total EFAS weighted value on the y-axis. This is consistent with David's [8], which states that by knowing the position of the organization in the industry, the strategist can choose a viable alternative strategy. A good farming business will produce a strategy matrix that will serve as a guideline and benchmark for further implementation following the factors that exist in the on-farm subsystem.

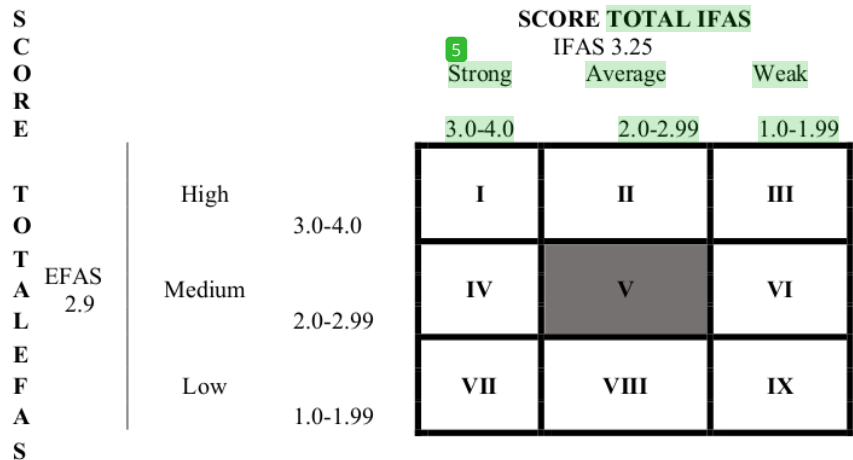


Figure 2. IE matrix based on IFAS and EFAS coffee development strategy.

Based on the matrix, it can be concluded that the business is in quadrant V. This score is shown by the IE matrix (3.25; 2.9) to position the coffee farm in the Benteng Alla Utara in a hold and maintain position. In this position, in conditions that indicate moderate internal and external locations, the appropriate strategy is the strategy. Sensitive (Market penetration, market development, and product development) or can also be called integration strategies (backward integration, forward integration, and horizontal integration).

6.4. Strategy analysis using the SWOT matrix

Based on the analysis of internal and external factors that have been described above, then these factors are further analyzed using a SWOT analysis matrix (Strengths, Weakness, Opportunity, Treatments) to formulate a coffee development strategy in Benteng Alla Utara Village, Baroko District, Enrekang Regency. Henceforth it is applied and applied for the development of coffee agribusiness. Based on the SWOT analysis conducted using a matrix, several strategies can be

obtained to develop coffee agribusiness in Benteng Alla Utara Village. These strategies are grouped based on SO, WO, ST, and WT strategies which can be seen in table 3.

Internal	Strengths	Weakness
	S-1 good quality coffee S-2 Productive farmer age S-3 Peteni who is quite competent S-4 High motivation of farmers	W-1 Old plant age W-2 Fluctuating coffee production results W-3 Farmer's capital limitations W-4 Lack of technology owned by farmers for post-harvest activities
External	Opportunity	W-O Strategy
	O-1 A availability of a wide market O-2 Number of coffee requests O-3 The mutual cooperation culture is still strong. O-4 Role of farmer groups	WO-1 Provides financial support institutions and training for farmers (W3, W4, O4) WO-2 Proposes assistance for coffee processing equipment and machines by utilizing existing farmer groups (W3, W4, O4)
	S-O Strategy	W-T Strategy
	SO-1 Develop coffee products by utilizing market opportunities (S1, S2, S3, S5, S7, O1, O2) SO-2 Increases coffee production by optimizing existing sources to increase farmers' incomes (S1, S2, S3, S4, S5, S6, S7, O2, O3, O5) SO-3 Involve farmers in coffee agribusiness training activities to develop their business (S1, S2, S3, S4, O4)	WT- Perform intensive rejuvenation and maintenance of coffee plants (W1, T1, T3, T4)
	Threats	S-T Strategy
T-1 Transfer of land functions T-2 Competitors T-3 Pest attack T-4 Unstable coffee prices	ST-1 Increase the promotion of coffee products typical of the Benteng Alla Utara (S1, T2, T4)	

Figure 3. SWOT matrix of coffee agribusiness development strategy

3.4.1. *SO Strategy (supporting aggressive strategies).* This strategy is made based on the way of farming considerations, namely by utilizing all the power to seize and take advantage of maximum opportunities. The SO strategy that can be adopted by a coffee farm in Benteng Alla Utara Village, such as:

- a. Develop coffee products by taking advantage of market opportunities.
- b. Increasing coffee production by optimizing the various sources available to increase farmers' incomes.
- c. Involve farmers in coffee agribusiness training activities to develop their business.

3.4.2. *ST Strategy (supports diversification strategy).* A strategy in using the strength of farming owned to overcome threats. ST strategy that can be pursued by coffee farming in Benteng Alla Utara Village, namely increasing the promotion of typical coffee products of Benteng Alla Utara.

3.4.3. *WO Strategy (supports turn around strategy).* This strategy is implemented based on the utilization of existing opportunities by minimizing existing weaknesses. The WO strategy that can be adopted by a coffee farm in Benteng Alla Utara Village, among others:

- a. Provides financial support institutions and training for farmers.

b. Propose assistance for coffee processing equipment and machines by utilizing existing farmer groups.

3.4.4. *WT Strategy (supports defensive strategies)*. This strategy is based on activities that are defensive and try to minimize existing weaknesses and avoid threats. The WT strategy that can be pursued by a coffee farm in the village of Benteng Alla Utara includes, perform intensive rejuvenation and maintenance of coffee plants. Based on the results of the SWOT analysis, coffee farming in Benteng Alla Utara Village has strengths that can be used in certain strategies, utilizing appropriate opportunities and simultaneously minimizing or avoiding existing weaknesses and threats. This position is very beneficial for farming by improving conditions above-average ability.

1 Conclusion

The coffee agribusiness development strategy in Benteng Alla Utara Village that must be carried out by coffee farmers and the government is developing coffee products by utilizing market opportunities, increasing coffee production by optimizing the various sources available to increase farmers' income, involving farmers in coffee agribusiness training activities to develop their farms, increasing the promotion of coffee products typical of the Benteng Alla Utara, providing financial support institutions and training for farmers, proposing the assistance of coffee processing tools and machines by utilizing existing farmer groups, and conducting intensive rejuvenation and maintenance of coffee plants.

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