

# Coffee Business Development Strategy (Case Study on the Forest Farmers Group, Bandung Regency, West Java, Indonesia)

Lies Sulistyowati<sup>1)</sup>, Hepy Hapsari<sup>2)</sup>, Kevin Simanjuntak<sup>3)</sup>

<sup>3)</sup>Student in Agribusiness study program Faculty of Agriculture, Padjadjaran University, Bandung. Indonesia.

<sup>1,2)</sup>Lecturer in Department of Agricultural Socio-Economics, Faculty of Agriculture, Padjadjaran University. Bandung. Indonesia.

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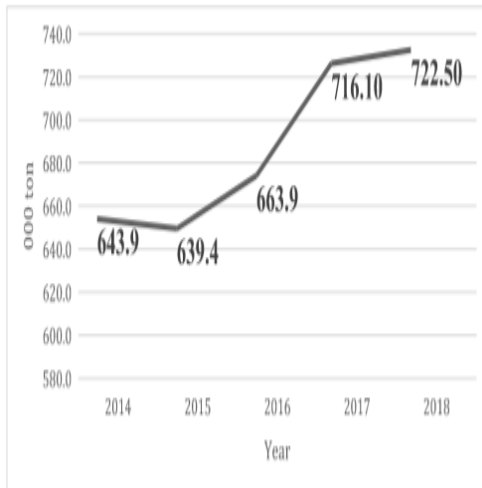
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**ABSTRACT:** Indonesia is the fourth largest coffee producer after Brazil, Vietnam and Colombia. One of the centre of coffee production in Indonesia is West Java. The type of coffee that is well-known in West Java is Java Preanger coffee which is Arabica coffee which has a Geographical Indication certification which is a market guarantee of the quality produced for consumers/buyers. The Giri-Senang Forest Farmers Group (FFG), in Girimekar Village, is one of the coffee production centers in Bandung Regency which has the highest productivity among other villages in Bandung Regency, West Java. The high demand for coffee from FFG Giri-Senang has resulted in farmers unable to meet market demand. So the purpose of this research is to find out the strengths, weaknesses, opportunities and threats of FFG Giri-Senang and what strategic priorities are right for developing production to meet market demand. The research design used was qualitative with case study research techniques. The informants are people who know and understand to be the state of FFG Giri-Senang . The results showed that FFG Giri-Senang has several factors that become strengths and weaknesses. These factors are used to take advantage of opportunities and minimize threats to FFG Giri-Senang . Based on the analysis, there are four alternative strategies for FFG Giri-Senang in developing coffee production . The alternative strategies are SO Strategy, WO Strategy, ST Strategy and WT Strategy. The results of the calculation show that the priority strategy for the Giri-Senang FFG is the WT Strategy in which the Giri-Senang FFG farmers should establish partnerships with : a). banks or investors to finance the expansion of coffee farming areas and increase the quality and quantity of coffee production, b). cafes or supermarkets/minimarkets to facilitate marketing and obtain better prices.

**KEYWORDS:** Coffee, Development Strategy, Forest Farmers Group (FFG), SWOT and ANP Analysis.

## I. INTRODUCTION

Coffee is one of the leading commodities from the Indonesian plantation sector , even Indonesia is also the fourth largest coffee producer in the world, after Brazil, Vietnam and Colombia. Coffee is one of the plantation commodities that is experiencing a rapid increase in Indonesia in the past five years. This can be seen from the increase in production from 2014 to 2018 by 12.21%, where this figure makes coffee a plantation commodity with the third highest growth after oil palm and rubber. This increase occurred due to an increase in consumers due to changes in consumer behavior, which initially consumed coffee as a fulfillment of needs, to show social identity and get comfort while consuming coffee (Afdholy, 2019). This increase in consumption has been projected to increase based on data on coffee consumption from 2002 to 2015, with a projected consumption in 2016 of 302,176 tons, increasing to 304,231 tons in 2017 and 306.183 tons in 2018 (Ministry of Agriculture, 2016).



**Figure 1. Total Coffee Production in Indonesia 2014-2018 (in thousand tons)**

Source: Indonesian Central Bureau of Statistics (2019)

National coffee production in Indonesia has increased significantly from 2015 - 2018 (Figure 1) 2016, an increase in national coffee production of  $\pm 24,500$  tons or 3, 83 % from the previous year's production. In 2017, an increase in national coffee production amounted to  $\pm 52,200$  tonnes or 7, 86 % of production in 2016. In 2018, there was an increase of national coffee production of  $\pm 6,400$  tons, or 0, 9 % of production in 2017. This increase illustrates the compliance effort demand for coffee, which is increasing in the last 3 years, due to changes in consumer behaviour that occur.

Cilengkrang District is one of the coffee production areas in Bandung Regency, with coffee production of 1308 tons in 2019 and 1350 tons in 2020 (Cilengkrang District Agricultural Extension Agency, 2020). Coffee productivity District of Cilengkrang above 3 tonnes/Ha during the years 2018 and 2019, which is 3.23 tons/Ha in 2018 and 3.16 tons/Ha in 2019. The village Girimekar, which is the village that the productivity of its highest District Cilengkrang, which in 2019 amounted to 5.57 tonnes / ha and 5.77 t / ha in 2020. The village Girimekar have decent coffee farming by testing the feasibility of the revenue- cost ratio amounted to 1, 9 (Amir et al, 2017).

Forest Farmers Group (FFG) Giri- Senang established in 2007, farmers' groups are located in the village of Giri-Mekar subdistrict Cilengkrang Bandung district, is one group of farmers who develop business cultivation of coffee with managing Perhutani-land. Analysis of coffee farming in FFG Giri-Senang, obtained results farm

income of coffee farmers in the amount of USD 5.81664 million/Ha/year with a profit of IDR.2,770,612 per year and the value of R/C is 1,9 which means coffee farm worth working on. (Nur HA et al. 2017). However, the high demand for coffee from FFG Giri-Senang has resulted in farmers unable to meet market demand. Efforts to develop or increase coffee production require a well-planned concept so as to produce alternative strategies and strategic priorities which are tools that are related to long-term goals in developing or increasing coffee production . So based on the background that has been described, the research aims to:

- 1) Describe the characteristics of coffee farmers in Giri Mekar Village based on their marketing channels.
- 2) Identify the strengths, weaknesses, opportunities and threats of FFG Giri-Senang .
- 3) Analyzing what strategic priorities are right for FFG Giri-Senang.

## II. RESEARCH METHODS

The research method used is a qualitative method , which is a study conducted to find the depth of a phenomenon and find a series of variables inductively by digging into the problems that have been formulated ( Raco, 2018 ) . While the approach can used is case study, which is a series of scientific activities conducted intensive, detailed and in-depth about a program, events, and activities, both at the individual, group , institution, or organization , in order to obtain a thorough knowledge of the incident (Rahardjo, 2017). The time of the research was carried out from September to December 2020 , while the research location was in the village of Girimekar, Cilengkrang District, Bandung Regency .

The data used are primary data and secondary data. The primary data obtained by observation field, by directly observing the conditions of farming coffee and institutional forest farmer group in the village of Girimekar. Primary data was also obtained from the Focus Group Discussion (FGD) were conducted to obtain the data depth with the main actors as Key informants involved in the marketing system using instruments interview guide in the form of a Focus Group Discussion Guide are structured and have been prepared . Key Informants are sources of information that can provide specific information based on the topic of concern, which has links such as kinship and family organization, economic system, political structure, and religious beliefs and practices, with the topic of concern (Kroloff, et al. 2019).

Furthermore, the data obtained were then analyzed using SWOT analysis using the ANP method, with the following stages :

- 1) Identify criteria and sub-criteria and make alternative strategies.
- 2) Pairwise comparisons between criteria and strategic priority objectives. ( $W_1$ )
- 3) Pairwise comparisons between criteria with attention to one of the criteria. (combined =  $W_2$ )
- 4) Determine the priority (rank) of the SWOT criteria.  
 $W \text{ factor} = W_2 * W_1$
- 5) By following the rankings on the SWOT criteria , pairwise comparisons between the sub-criteria are then carried out again.
- 6) The next step is to make calculations.

**Table 1. Global Weight of Sub Criteria**

SWOT criteria	Criteria weight	Sub-criteria SWOT	Sub-criteria weight	Main weight	Matrix
Strength		S1			
		S2			
		...			
Weaknesses		W1			
		W2			
		...			
Opportunity		O1			
		O2			
		...			
Threats		T1			
		T2			
		...			

Noted : Main weight = Criteria weight \* sub-criteria weight

- 7) Pairwise comparisons between sub-criteria and alternatives. ( $W_4$ )
- 8) Overall, the strategic priorities reflected based on the influence between the SWOT criteria can be calculated as follows:

$$W_4 * W_{\text{sub factor (global) alternative}} = \begin{bmatrix} SO \\ WO \\ ST \\ WT \end{bmatrix}$$

### III. RESULTS AND DISCUSSION

Characteristics of Farmers Based on Marketing Channel

The characteristics of coffee farmers are grouped into two, namely (Table 2):

- 1) Category I is farmer member of FFG Giri-Senang who is also a member of the Cooperative who regularly distributes cherry coffee to the Cooperative according to its capacity.
- 2) Category II which is a member farmer of FFG Giri-Senang who processes his cherry coffee into unhulled coffee using the facilities of the Giri Farmer Group Cooperative and sells the processed unhulled coffee through a grain processor on a regular basis.

**Table 2. Characteristics of Coffee Farmers Based on Marketing Channels**

Characteristics		Farmers Category I (%)	Farmers Category II (%)
Age	<65 years old	84	100
	>65 years old	16	0
Number of Family Dependents	<=2	71	90
	>2	29	10
Land area	<1 Hectare	58	60
	1 Hectare	28	40
	>1 Hectare	14	0
Last education	Primary School	50	50
	Junior high school	38	50
	Senior High school	12	0

Category II farmers are a group of farmers who are still productive with age under 65 years, indicating that Category II coffee farmers have advantages in accessing information because of the tendency to have a wider scope of partnership, as in Cristovao (2015). While farmers first category of which 16 % are farmers with age is not productive,

preferring to distribute coffee shape cherry crop yields to Cooperative Farmers Group Giri-Senang and Middleman.

Category I and II coffee farmers are a group of farmers whose majority have 2 or less family dependents. This shows that the majority of Girimekar Village coffee farmers have participated

in the BKKBN program, which proves that Girimekar Village coffee farmers are aware of the importance of meeting family needs by minimizing dependents. family to avoid the possibility of more family needs. Judging from the land area, Category I coffee farmers have a land area of more than 1 Ha (14%), This shows that farmers with large areas have higher coffee production , so they tend to sell their coffee through formal markets such as cooperatives (Asefa, 2016 ). Some of Category I coffee farmers have high school education (12%), while category II coffee farmers do not have high school education, according to Cristovao (2015) the last education of farmers will influence farmers to weigh the advantages and disadvantages in making decisions about which marketing channel to use.

Coffee harvested by coffee farmers in Girimekar Village is processed into 3 types of preparation, namely Fullwash, Honey, and Natural. Each coffee that is distributed by the farmer must first pass the sorting stage by the recipient of the cherry-shaped coffee, where the coffee is required to be at least 80% red and pass the water mining process. Coffee that floats when mined will be included in the category of unfit for processing because it may have been infected with pests or rot.

#### **Internal Environmental Analysis**

Internal environmental analysis conducted on FFG Giri-Senang intended to identify strengths and weaknesses owned by the Group producer of Arabica coffee that.

#### **Marketing Factor**

Analysis of marketing activities includes analysis of customers, target markets and marketing mix. There are quite a lot of customers from FFG Giri-Senang , both from Bandung and outside Bandung. Arabica coffee produced by FFG Giri-Senang in i have a distinctive taste and preferred by consumers of coffee. The selling price of Arabica coffee sold by FFG Giri-Senang for each buyer can be different. This is because the selling price of the coffee actually depends on the agreement of both parties ( FFG Giri Senang and the buyer). The distribution channels for Arabica coffee from Giri-Senang's FFG are grouped into 4 channels, namely:

- 1). Coffee Farmers Cooperative Processing grain coffee Consumer/Cafés
- 2). Coffee Farmers Cooperative PT Sarimukti Consumer/Cafés
- 3). Coffee Farmers Cooperative Processing grain PT Sarimukti Consumer/Cafés
- 4). Coffee Farmers Middleman/Collector of Consumer/Cafés

The promotion carried out by FFG Giri-Senang in marketing its Arabica coffee is still very simple, namely word of mouth and door to door promotion strategies.

#### **Factors of Production**

The age of the coffee trees owned by the farmers until now, the majority are 5 to 6 years old. The coffee grown by the farmers is Arabica coffee of the debt- Sigarar variety . The status of the land used for coffee farming is leased land, indeed in the field conditions that the land used by farmers is entirely land owned by Perum Perhutani.

The system for procuring production facilities for coffee farmers at the research site consists of several parts, including self-production, buying from farm shops, as well as some assistance from the Government which is channeled through farmer groups. The means of production, which are usually made by themselves or purchased at an agricultural shop, are manure and vegetable pesticides, the price of manure in agricultural shops is IDR. 500/kg and the price of vegetable pesticides is IDR. 10,000/liter. Coffee tree maintenance in the study that fertilization is done every 6 months using manure, pesticide application is done every 6 months, trimming, weeding, and pest and disease control.

In Cilengkrang District, the harvest month occurs from May to September in one year. Harvest can occur in 4-5 months with an interval of picking every 10-14 days. For picking, one must choose what is commonly called red picking, namely picking red ripe fruit , picked one by one from each whole manually.

The coffee village in Cilengkrang is located on the Palasari hill, Cilengkrang district, which is also known as "Palasari Coffee" and Arabica "Jalu Coffee". Coffee from Cilengkrang is referred to as " Kopi Kolenang " (an acronym for Legok Nyenang), has a specific taste and is liked by Bandung consumers, even its green-bean is already well-known to France. The Bandung Regency Government is very supportive of the development of this coffee through breeding and marketing. Even the private sector also provides assistance through CSR ( Corporate Social Responsibility) to develop this Cilengkrang coffee.

#### **Management Factor**

In the Arabica coffee business , there must be a management to regulate the activities at FFG Giri-Senang to produce quality Arabica coffee. This management function consists of several activities, namely planning, organizing, implementing, controlling and evaluating. The

existing management at FFG Giri-Senang to be done by a Chairman and assisted by a secretary and treasurer, organizational structure it is still very simple.

#### Human Resources Factor

The human resources at FFG Giri-Senang are almost entirely from coffee farmers who want to partner with this company before being trained first or in other words being given training on how to cultivate coffee with good quality, so that plasma farmers can produce Arabica coffee with high yields. the best. The role of PPL is very helpful in developing this coffee cultivation.

#### Financial and Capital Factors

Producer of Arabica coffee , FFG Giri-Senang to have had lapo ran to finance but unfortunately he p o ran-report is still fragmented

in different files. This is because the laptop used by FFG is freely accessible to its members or other farmers. Financial reports are used by FFG to find out the state or development of its business and also serve as a guide to streamline spending in the next period.

The capital required by farmer members of FFG Giri-Senang is quite large at first , this is because the costs of land processing and coffee plant maintenance are not small. Therefore, this factor is one of the reasons for the high selling price of coffee. The required capital is an average of IDR. 3,046,028.00/Ha, comes from their own capital and some of them use loan capital. Based on the study of Nur Halimah Amir et al (2017), the analysis of coffee farming in FFG Giri-Senang is as follows:

**Table 3. Analysis of Coffee Farmers Farming (per hectare and per year)**

No	Description	Unit	Amount	Price (IDR)	Value (IDR)
1	<b>Production/Revenue</b>	<b>Kg</b>	<b>996</b>	<b>5840</b>	<b>5,816,640</b>
2	Fixed cost				
	Land lease				1,163,328
	Equipment depreciation	IDR			119,000
3	Variable Cost				
	Labor Weeding	Man days	12	35,000	420,000
	pruning	Man days	3	25,000	75,000
	Harvesting (IDR/kg)	Wholesale		700	697,200
	Porter Services (IDR/kg)	Wholesale		500	498,000
	Manure	Kg	27	500	13,500
	Vegetable Pesticide	Liter	6	10,000	60,000
4	<b>Total cost</b>				<b>3,046.028</b>
5	<b>Profit</b>				<b>2,770,612</b>
6	<b>BEP</b>				<b>315</b>
7	<b>R/C</b>				<b>1.9</b>

Source : Nur Halimah Amir et al. (2017)

#### Partnership

The strategy used by FFG Giri-Senang in developing the Arabica coffee business is by partnering. In essence, the partnership carried out by FFG Giri-Senang with Perhutani, Cooperatives, PT Sari Mukti and cafes in the city of Bandung. The partnership pattern applied with Perhutani is in

the use of Perhutani's land, as well as preserving the environment and forests. Partnership with PT Sari Mukti, in terms of coffee bean processing, while partnership with Cafés in Bandung in terms of marketing. So from the analysis of the internal factors, the strengths and weaknesses can be obtained as shown in Table 4.

**Table 4. Identification of Strengths and Weaknesses in FFG Giri Senang**

Internal factors	
Strengths	Weakness
S <sub>1</sub> : Excellent quality (taste)	W <sub>1</sub> : Promotion is very simple
S <sub>2</sub> : Competent coffee farmer	W <sub>2</sub> : The financial statements are still simple.
S <sub>3</sub> : Standard selling price	W <sub>3</sub> : The organizational structure is still simple
S <sub>4</sub> : There are many regular customers	W <sub>4</sub> : Limited capital for development

**External Environmental Analysis**

External environmental analysis conducted on FFG Giri-Senang is intended to find out the opportunities and threats they have, so they can find out how to take advantage of opportunities and minimize threats.

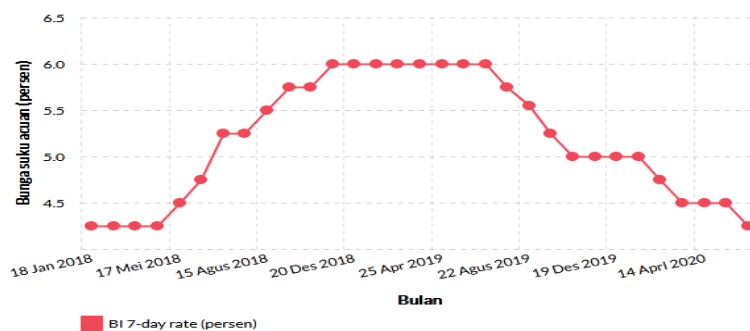
**Macro Environmental Analysis  
 Political and Policy Factors**

In the official website of the Ministry of Cooperatives and Small and Medium Enterprises of the Republic of Indonesia, it is stated that the State Ministry of Cooperatives and SMEs is targeting the addition of four districts to become One Village One Product (OVOP) program development areas to optimize the potential of local products. The four districts are Bandung, Garut, Cianjur, and Bangli. The development of the coffee business can't be separated from the institutional approach that is expected to strengthen or support this coffee business. Among them are institutions that support coffee commodities in Cilengkrang such as the Forest Farmers Group (FFG) . This institution has a program to process forest resources together with

the surrounding community called the PHBM program. This program is based on the decision of the Board of Directors of Perum Perhutani Number 682/KPTS/DIR 2009 which is a collaboration between Perum Perhutani and the community to plant coffee plants in the forest, because coffee plants require standing plants. The Indonesian Coffee Association or often abbreviated as AKLI is also one of the association institutions that supports the coffee business. This association is a forum for its members to exchange information, experience, education, coaching, marketing, research and also work together (Edy Pangabeau, 2013).

**Economic Factor**

The state of the economy in an area or in a country will definitely have an impact or affect the agricultural sector, industry and other sectors in the area. The economic factors in question include interest rates and inflation. Economic conditions will have an influence on the sustainability of this coffee farming business, for example the current interest rate.



Source: Bank Indonesia

**Figure 2 . Bank Indonesia Reference Interest Rate Chart, January 2018-June 2020**

Seen from Figure 2. That for 29 months, from January 2018 to June 2020 , the BI Rate was stuck at 3.75. This shows the consistency of interest rates in Indonesia where the Indonesian economy is growing quite high with controlled and low inflation, but starting in June 2018 Bank

Indonesia decided to increase the BI Rate by 25 bps to 6.00 percent. This policy is the first step to respond to rising inflation expectations and maintain macroeconomic stability and financial system stability. However, the impact of the Covid-19 pandemic in early 2019, caused since the first

quarter of 2020, the national and West Java economic growth rates (LPE) had decreased. West Java LPE, which at the end of 2019 reached 5.07 percent, fell to 2.73 percent. This results in a decrease in people's purchasing power. So that Bank Indonesia (BI) again lowered the benchmark interest rate at the November 2019 Board of Governors Meeting to 3.75 percent. This interest rate will influence decision makers at FFG Giri-Senang to reconsider if they plan to expand their farming business through bank loans or not.

### **Socio-Cultural Factors**

Socio-cultural factors that exist in society will determine the values, perceptions, choices and behavior adopted by a society. Likewise, if there is a socio-cultural change, it will also affect changes in their values, perceptions, choices and behavior. Now people's lifestyles are starting to shift to fulfilling needs that are more concerned with the health aspect. This can be an opportunity for the coffee business, because the caffeine content in this coffee is lower than regular coffee. In addition, community trends also affect the lifestyle of the wider community. The habit of drinking coffee has become a trend and has been going on for a long time. The activity of drinking coffee has even become part of the lifestyle of today's urban communities. Many people now know and love coffee because of its unique aroma and taste. So that cafes began to bloom, which were full of coffee lovers who always enjoyed this coffee.

### **Technological Factor**

Industrial development cannot be separated from the factors of science and technology or science and technology. The development of this technology can provide convenience for business actors in developing their business both in terms of production and marketing. Technological developments in the production aspect can be seen from the tools or machines used during the production process. As the number of production grows, the coffee production business uses tools including huller and roaster. This tool can save time and energy for peeling horns and also for roasting coffee beans. Marketing aspects can also be facilitated by technological developments, for example in the field of telecommunications and payment systems. The use of telephone or internet can facilitate communication between coffee business actors and their consumers who are quite far from the company's location. The internet can also be used to develop the market, one of which is by creating an official website that can be accessed directly by

the public. Ease can also be felt from an easier and more effective payment system, namely the transfer system through bank services or through ATM.

### **Input Availability Factors**

The availability of raw materials in coffee cultivation, namely: coffee seeds, fertilizers, insecticides and labor greatly affects the sustainability of the business. For coffee seedlings, it is no longer a problem, because the plants are 5-6 years old, the most problematic is if they want to expand the coffee area. This makes the availability of these raw materials an opportunity or a threat to coffee farmers.

### **Environmental Analysis of Coffee Farming/On-Farm**

#### **New arrivals**

Coffee cultivation provides considerable profits, seen from the R/C between 1.9 and 2.78 (Nur Halimah Amir et al. 2017; Kevin & Sulistyowati, 2020) and the increasing market demand for coffee products so that many entrepreneurs began to glance at this coffee cultivation and was interested in getting into the business. The market prospect is also quite good and is still very open, resulting in many new farmers or farmer groups emerging and operating in the same commodity. This creates intense competition between farmers, farmer groups or coffee areas.

#### **Threat of Substitute Products**

Product substitution or replacement product is another distinct product will but have properties to replace a product which may affect the existence of such products on the market. The existence of this substitute product can be a threat to a Giri-Senang FFG if the substitute product has a lower price. In this case, the products that can be substituted for FFG Giri-Senang coffee are other regional coffees and teas. However, the advantages of this coffee are its unique taste and aroma and its customers are segmented and different from ordinary coffee or tea.

#### **Bargaining Power of Suppliers**

Suppliers in FFG Giri-Senang have a very important role for the continuity of their coffee business. The suppliers are coffee farmers who are members of FFG Giri-Senang producing coffee cherries. Cherry copies can be obtained from existing coffee plantations or owned by the coffee farmers or were bought from middlemen who sell more regular coffee. Based on this explanation, the bargaining power of farmers and KHT Giri-Senang is balanced, in fact there is a mutualistic symbiosis.

**Buyer Bargaining Power**

Buyers are the final destination of product distribution channels in a supply chain. Demand from consumers for a product will determine the production capacity of the product, so farmers must be able to meet market demand appropriately in order to get optimal profits. Arabica coffee buyers are segmented from the lower, middle and upper classes, this is because the coffee price is affordable by all levels of consumers. These buyers (such as cafes), because their number is relatively limited compared to the number of farmers, then have the power to be able to force prices down, but with higher quality consumers feel satisfied. Buyers can be said to affect the price set by the farmer or can easily switch to substitute products other so that the buyer has bargaining power better.

**Competition between coffee producers**

FFG Giri-Senang's competitors in producing coffee are getting more and more, because this coffee business is getting more and more attractive among the people. Many entrepreneurs have started to enter this coffee farming, both domestically and abroad. However at the regional level, the competitor is the Manglayang farmer group association in Cipanjalu Village, Cilengkrang District, Bandung Regency, with a coffee area of about 200 hectares. However, as more and more farms are emerging and competition is getting tougher, there are coffee farmer groups who set selling prices far below the prices of their competitors. This causes the company to have to reduce its production costs, one way is by mixing coffee with young coffee so that the coffee is not 100 percent pure. Furthermore, from the analysis of these external factors, the opportunity and threat factors can be obtained in Table 5.

**Table 5. Identification of Opportunities and Threats Factors for FFG Giri-Senang**

External Factors	
Opportunity	Threat
O <sub>1</sub> : Regency Bandung men j adi one OVOP program development	T <sub>1</sub> : Limited land availability
O <sub>2</sub> : There are institutions supporting the coffee business	T <sub>2</sub> : Threat of new entrants or coffee producers
O <sub>3</sub> : The ever-increasing demand for coffee	T <sub>3</sub> : Increasing competition
O <sub>4</sub> : The trend of people to drink coffee and their lifestyle pays attention to health	T <sub>4</sub> : The rise of fake coffee

**Formulation of Coffee Production Development Strategy at FFG Giri-Senang**

The emphasis of the strategy for developing Arabica coffee production is to increase productivity, product quality and also the total production of Arabica coffee, especially at FFG Giri-Senang as one of the first coffee farmer groups to pioneer coffee in Cilengkrang District which has the largest coffee growing area in Bandung Regency.

The steps in formulating a strategy are :

- a) Identifying Criteria and Sub-Criteria and Making Alternative Strategies

In formulating a strategy using the ANP method in the SWOT analysis, the first must identify the criteria and sub-criteria from the results of the previous internal and external environmental analysis. The criteria in the SWOT analysis are strengths, weaknesses, opportunities and threats. Meanwhile, the sub-criteria are what factors are strengths, weaknesses, opportunities and threats that have been previously identified by analyzing internal factors and external factors of FFG Giri-Senang.



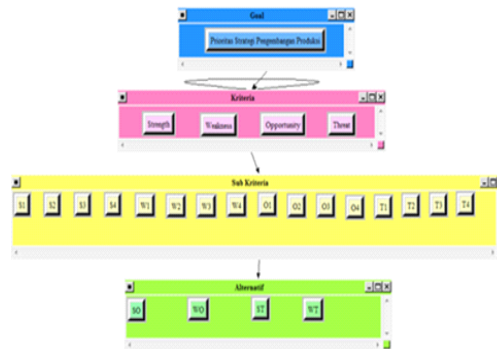


Figure 3. Structure Hierarki SWOT Results Superdecision

To increase the coffee production of FFG Giri-Senang to meet market demand, alternative strategies are needed to achieve it. The alternative strategy is obtained from the formulation of internal and external factors in the SWOT matrix so as to produce alternative strategies such as the following:

- SO Strategy : Utilization of existing resources to support the expansion of coffee production in one area with support from the government.
- WO Strategy : Looking for investors or loan funds to support the increase in coffee production , through the expansion of the coffee area .
- ST Strategy : Increasing production efficiency to increase competitiveness.

- WT Strategy : Cooperating with banks or other coffee farmers in addressing limited capital.
- b) Pairwise Comparison between Criteria with Strategic Priority Goals ( $X_1$ )  
 After identifying the criteria, sub-criteria and alternative strategies for strengths, weaknesses, opportunities and threats in FFG Giri-Senang , then make a pairwise comparison between predetermined criteria. Based on the calculation of the results of the questionnaire, the priority weights between criteria can be seen in Table 6. The largest weight is obtained from the Opportunity criteria, which is 0.49961 and is followed by Strength, Weakness and Threat.

Table 6 Results of Pairwise Comparison Between Criteria

Weakness	0.16675
Opportunity	0.49961
Threat	0.07740
Strength	0.25624
Best Strategy	Weight

CI = 0.04417

From Table 5 it was obtained matrix  $W_1$  as follows:

$$X_1 = \begin{bmatrix} 0,25624 \\ 0,16675 \\ 0,49961 \\ 0,07740 \end{bmatrix}$$

c) Pairwise Comparison between Criteria with Attention to One Criterion ( $X_2$ )

At this stage, pairwise comparisons are carried out or pairwise comparisons between criteria with attention to one of the criteria, this aims to obtain the weight of each criterion. The weights are obtained from the results of the calculation of the questionnaire that has been filled in previously by the informant. The weights will later be used to determine priorities in these criteria. From the calculation of the obtained matrix  $W_2$  as follows:

$$X_2 = \begin{bmatrix} 1,00000 & 0,13151 & 0,17437 & 0,69096 \\ 0,08522 & 1,00000 & 0,63371 & 0,21764 \\ 0,64422 & 0,69406 & 1,00000 & 0,09140 \\ 0,27056 & 0,17443 & 0,19192 & 1,00000 \end{bmatrix}$$

d) Determining the Priority (Rank) of the SWOT Criteria

To determine strategic priorities from SWOT criteria such as Strength, Weakness, Opportunity and Threat it is calculated by multiplying the matrix  $W_2$  by  $W_1$  as follows:

$$X \text{ factor} = X_2 * X_1 = \begin{bmatrix} 0,41877 \\ 0,52204 \\ 0,78749 \\ 0,27170 \end{bmatrix} \rightarrow \begin{bmatrix} S \\ W \\ O \\ T \end{bmatrix}$$

Based on the results of these calculations, it can be concluded that the priorities of the SWOT criteria are Opportunity (opportunity) with a value of 0.78749, Weakness of 0.52204, Strength of 0.41877, and the last priority is Threat of 0.27170.

Pairwise comparisons between sub-criteria were carried out to determine the weight of each sub-criteria. The weights are obtained from the results of the calculation of the questionnaire that has been filled in previously by the informant. This weight will later be used to determine the priority in the sub-criteria.

e) Pairwise Comparison between Sub Criteria

**Table 7. Pairwise Comparison Results Between Strength Sub Criteria**

Strength	Weight	Weakness	Weight
S <sub>1</sub>	0.33998	W <sub>1</sub>	0.17617
S <sub>2</sub>	0.28734	W <sub>2</sub>	0.08691
S <sub>3</sub>	0.23701	W <sub>3</sub>	0.04901
S <sub>4</sub>	0.13567	W <sub>4</sub>	0.68786

CI = 0.06948    CI = 0.09204

Opportunity	Weight	Threat	Weight
O <sub>1</sub>	0.24127	T <sub>1</sub>	0.06319
O <sub>2</sub>	0.10787	T <sub>2</sub>	0.13629
O <sub>3</sub>	0.57003	T <sub>3</sub>	0.13249
O <sub>4</sub>	0.07993	T <sub>4</sub>	0.66804

CI = 0.04537    CI = 0.09765

f) Calculation Table (X<sub>3</sub>)

To determine the priority of the sub-criteria of each criterion in the SWOT, a calculation is made as shown in Table 8. The main weight for the sub-criteria is obtained from the

product of the weight of the criteria (column 2) with the weight of the sub-criteria (column 4). The value on the main weight shows the priority of the sub-criteria of each of the existing criteria.

**Table 8. Global Weight of Sub-Criteria**

	Criteria weight	SWOT sub-criteria	Sub-criteria weight	Main weight
<b>S</b>	0.41877	S <sub>1</sub>	0.33998	0.14237
		S <sub>2</sub>	0.28734	0.12033
		S <sub>3</sub>	0.23701	0.09925
		S <sub>4</sub>	0.13567	0.05681
<b>W</b>	0.52204	W <sub>1</sub>	0.17617	0.09197
		W <sub>2</sub>	0.08691	0.04537
		W <sub>3</sub>	0.04901	0.02559
		W <sub>4</sub>	0.68786	0.35909
<b>O</b>	0.78749	O <sub>1</sub>	0.24217	0.19071
		O <sub>2</sub>	0.10787	0.08495
		O <sub>3</sub>	0.57003	0.44889
		O <sub>4</sub>	0.07993	0.06294
<b>T</b>	0.27170	T <sub>1</sub>	0.06319	0.01717
		T <sub>2</sub>	0.13629	0.03703
		T <sub>3</sub>	0.13249	0.03600
		T <sub>4</sub>	0.66804	0.18151

g) Pairwise Comparison between Sub Criteria and Alternatives (X<sub>4</sub>)

After making alternative strategies from the existing sub-criteria priorities, the next step is to make pairwise comparisons between sub-criteria and alternatives.

h) Strategic Priority

Overall, to find the right strategic priorities for FFG Giri-Senang in developing coffee production at this time, namely:

$$\text{Strategy priority} = X_4 * X_3$$

$$= \begin{bmatrix} 0,50001 \\ 0,49357 \\ 0,37474 \\ 0,63164 \end{bmatrix} = \begin{bmatrix} SO \\ WO \\ ST \\ WT \end{bmatrix}$$

From the results of the analysis, obtained the right strategy priority for FFG Giri-Senang based on a SWOT analysis using the ANP method, namely the WT strategy. This strategy is a strategy that minimizes weaknesses and avoids threats. In the previous analysis, the WT strategy, namely the coffee company FFG Giri-Senang, was recommended to cooperate with banks or with other investors in order to increase coffee production in response to limited capital. If this strategy is to be implemented by FFG Giri-Senang, it can be started by observing the surrounding environment or other environments that are not too far from the location of the farm and have the potential to produce coffee that meets the standards of FFG Giri-Senang . This observation does not only focus on the coffee produced in the area, but also on the aspect of human resources who will serve as partners of FFG Giri-Senang in developing coffee production. FFG Giri-Senang previously had to explain or explain to the farmers who were offered to become partners, about the benefits that would be obtained if they became partners. The partner's interest is then continued by making a work agreement between the two parties. During a certain period this strategy is measured and evaluated whether this strategy can run well and provide more benefits for FFG Giri-Senang or not. If not, then improvements must be made to the things that are the problem in the strategy. If it doesn't work, the company can change the strategy that will be applied, for example to the second or other strategic priorities.

The second priority strategy is the SO strategy. This strategy is the use of existing resources to support the expansion of coffee production in one area with support from the government. The third priority is the strategy advocated WO FFG Giri-Senang to have to find an investor or loan funds to support increased production of coffee in the OVOP (One Village One Product) program. While the last strategic priority is increasing production efficiency to increase competitiveness.

#### IV. CONCLUSION

1) The characteristics of coffee farmers who are members of FFG Giri-Senang are as follows: Farmers who sell in the form of unhulled rice are all still in their productive age, while 16% of farmers who sell in the form of cherries are no

longer productive. Judging from the number of dependents and land area, farmers who sell in the form of cherries, relatively more dependents on their families, and as many as 14% have a land area of more than 1 hectare. While farmers who sell in the form of grain, the land area is less than 1 hectare. When viewed from the educational background, the conditions are relatively the same, namely the majority of elementary and junior high school graduates.

2) Based on the results of the analysis of the internal and external environment of FFG Giri-Senang in the coffee business, it can be identified as follows:

- Strength: a) The quality or taste is very distinctive, b) Competent coffee farmers, c) The selling price of a standard, d) It has a regular customer
- Weakness: a) Promotion is very simple, b) Organizational structure is simple, c) Financial reports are still simple, d) Limited capital for development.
- Opportunities: a) Bandung Regency is one of the developments of the OVOP program, b) There is an AKLI institution, c) The demand for coffee continues to increase, d) The trend of people to drink coffee.
- Threats: a) Limited availability of land, b) Threat of new entrants, c) Increasing competition, d) The rise of counterfeit coffee.

3). The most appropriate strategy for now for FFG Giri-Senang in developing coffee production is the WT strategy, where FFG Giri-Senang should cooperate with : a). banks or investors to finance the expansion of coffee farming areas and increase the quality and quantity of coffee production, b). Cafes or supermarkets to facilitate marketing and obtain better prices.

#### V. SUGGESTION

- For FFG Giri-Senang to have to improve the management field, especially the finance and marketing department, so that financial reports are more well organized, so that monitoring and evaluation can be carried out to prevent the risk of loss.
- For farmer members FFG Giri-Senang , you should always maintain the quality of the coffee it produces by way of always follow the SOP and maintaining the purity of the coffee. This is done to maintain the existing trust between FFG Giri-Senang and its partners. So that there is always a mutually beneficial cooperation for both parties.
- The government, especially the Bandung Regency government, should always support the OVOP program in Bandung Regency, especially Coffee from FFG Giri-Senang, by providing good

and correct coffee cultivation counseling, from on farm to post-harvest. Also the government needs to support providing coffee processing facilities and low interest capital for the intensification and extensification of the coffee area at FFG Giri-Senang.

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