



ARABICA COFFEE PROCESSED PRODUCT DEVELOPMENT STRATEGY IN CENTRAL ACEH DISTRICT

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Abstrack

Gayo coffee is quite famous in the world because it has a distinctive aroma and enjoyment and if it is *cupped* or taste tested. Aspects of coffee marketing can be viewed in terms of the type of commodity, actors, supply and demand. In general, the types of coffee marketing products are: (a) coffee *grain* /labui; (b) arabica coffee beans; (c) coffee grounds, and (d) other processed products. Central Aceh Regency generally produces coffee in the form of Arabica coffee beans (*Green bean*) while nowadays, the conditions of competition are getting tighter where each country develops their coffee processed products. The strategy for developing Arabica coffee commodities today is expected to be no longer how to increase production, but how a commodity can be processed so that added value is obtained *from* the processing process. The development of added value in coffee commodities is expected to produce diversified processed coffee products, such as *roasted coffee*, *instant coffee*, *coffee mix*, *decaffeinated coffee*, *soluble coffee*, coffee beer (*coffee beer*), *ice coffee* which has an important meaning, because it can become a leading commodity that have high competitiveness in the international market. This research was conducted in Central Aceh District. This is because Central Aceh Regency is the main location for processing coffee products in Aceh Province. The research method used is descriptive quantitative research method. The data collection method used was in-depth interviews with several *key persons*, namely: the trade department, the agriculture office, coffee expert staff, Gayo arabica coffee farmers and four coffee agroindustry *green bean* and coffee powder which has the largest export quota in Bener Meriah Regency, namely KBQB Baburrayyan, Cooperative Oro Coffee, and PT Olam Coffee. The data analysis method used to calculate the added value is the Hayami method. This research resulted in TKT 1 with the output target in the form of (1) scientific publications in index international research journals *crossreff* with the status *accepted*, (2) HKI research reports with the status *granted*, (3) publication of activities in print or *online media*.

Keywords: *Gayo arabica coffee, processed coffee products, development strategy*.

1.INTRODUCTION

The agricultural sector has a fairly important role in economic activities in Indonesia, this can be seen from its contribution to the Gross Domestic Product (GDP) which is quite large, which is around 12.72 percent in 2019 or is the third rank after the manufacturing sector and the wholesale trade sector. and retail. One of the sub-sectors with a large potential is the plantation sub-

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sector. The contribution of the plantation sub-sector in GDP is around 3.27% percent in 2019 or is the first in the agricultural sector (Central Bureau of Statistics, 2019).

Plantation is one of the sub-sectors of the agricultural sector. Plantation crops that are mostly produced in Indonesia are coffee, rubber, tea, sugar cane, cocoa, coconut, tobacco and others (Istianah et al, 2015). Coffee is a plantation commodity that is widely traded in the international market. Indonesia is the fourth largest coffee producing country in the world after Brazil, Vietnam and Colombia. The targets of coffee exports originating from Indonesia are generally to America, Japan, the Netherlands, and Italy. The area of smallholder coffee plantations in Indonesia in 2019 was 1,215,500 ha with a production of 731,600 tons. The total production, as many as 359,052 tons was exported with a value of US\$ 883,123 thousand (Central Bureau of Statistics, 2019).

There are only four types of coffee plants that are widely cultivated in Indonesia, namely arabica, robusta, liberica and excelsa. Each of these types has different properties. There are only two types of coffee that have economic value and are traded commercially in Indonesia, namely Arabica coffee and Robusta coffee (Rahardjo, 2012).

Aceh coffee, which is better known internationally is the type of Gayo Arabica coffee because it has a distinctive aroma and taste (Tambarta et al., 2016) . The name Gayo Arabica coffee arises because the Arabica coffee with the best taste comes from the Gayo highlands, namely the districts of Central Aceh and Bener Meriah as shown in the following table :

Table 1. 1. Land Area and Total Coffee Production in Aceh Province, Year 2020

County/City	Land Area (Ha)			Amount	Production (Tons)
	TBM	TM	TR		
Simeulue	-	-	-	-	-
Aceh Singkil	-	10	93	103	5
South Aceh	155	948	319	1.422	340
Southeast Aceh	216	140	22	378	144
East Aceh	-	442	80	522	143
Central Aceh	2,936	42,569	4.330	49,835	34,609
West Aceh	20	425	134	579	85
Aceh Besar	163	1.173	418	1,754	586
Pidie	2.297	3.974	4,019	10,290	2,942
Bireuen	3	7	3	13	4
North Aceh	145	1,510	233	1.888	755
Southwest Aceh	410	186	95	691	128
Gayo Lues	2.812	1,951	101	4,864	1.366
Aceh Tamiang	20	13	2	35	5
Nagan Raya	90	156	83	329	82
Aceh Jaya	648	821	541	2010	566
Bener Meriah	6,847	35,403	4.023	46,273	29.101
Pidie Jaya	34	33	34	101	11
Banda Aceh	-	-	-	-	-
Sabang	-	-	-	-	-
Langsa	-	-	-	-	-
Lhoksemawe	-	1	2	3	1
Subulussalam	2	5	3	10	2
Total	16,798	89,767	14,535	121.100	70,875

Source: Central Bureau of Statistics, 2020



The table above shows that there are eight districts that are centers of coffee production in Aceh Province. Central Aceh district is a production center with the largest land area among the six districts (BPS Aceh Tengah, 2020). The data above shows that Central Aceh Regency has enormous potential to develop Gayo Arabica coffee. This opportunity can certainly be the main basis for the process of developing Gayo coffee products into various processed products such as coffee powder, instant coffee or other processed coffee products. But until now power Gayo coffee's competitiveness and added value are still lagging behind other major world coffee producing countries, which are still limited to *green beans* (Fadli et al., 2020). Meanwhile, the current competitive conditions for the coffee market are getting tighter where each country develops their coffee processed products from each other. The strategy for developing Arabica coffee commodities today is expected to be no longer how to increase production, but how a commodity can be processed so that added value is obtained *from* the processing process.

Through this research, it is hoped that Gayo coffee will not only be marketed as raw or semi-finished materials. The development of processed coffee should be more focused on increasing the added value of Gayo coffee processed products (Fadli et al., 2021). The development of added value in coffee commodities is expected to produce diversified processed coffee products, such as *roasted coffee*, *instant coffee*, *coffee mix*, *decaffeinated coffee*, *soluble coffee*, coffee beer (*coffee beer*), *ice coffee* which has an important meaning, because it can become a leading commodity that have high competitiveness in the international market. This problem formulation is the main reason for the need to know how the added value of Gayo coffee in Central Aceh Regency is. **This research uses** descriptive quantitative research methods. Quantitative descriptive is a method that describes the research topic with variables that can be measured quantitatively (Sugiyono, 2011).

This research was conducted in Central Aceh District. This is because Central Aceh District is one of the main production centers in Aceh. The object of this research is Gayo Arabica Coffee industry players who have a Gayo Arabica coffee culinary business. The data collection method used was in-depth interviews with several *key persons*, namely: the Department of Trade and Industry, K BQ Baburrayan, Cooperative Oro Coffee, and PT Olam Coffee. Each agro-industry will be analyzed for its strengths, weaknesses, opportunities and threats. The development strategy for processed coffee products will be formulated using a SWOT matrix analysis tool, which is a method for systematically identifying various factors to formulate the required strategy. The analysis is based on logic that can maximize *strengths* and opportunities, but at the same time minimize weaknesses *and* threats (David 2001). SWOT analysis is carried out in three stages, namely data collection (*input stage*), analysis (*matching stage*), and decision-making (*decision stage*).

SWOT data can be developed quantitatively through the calculation of the SWOT analysis developed by Pearce and Robinson (1997) in David (2011) through the EFAS-IFAS analysis table in order to know for sure the real position of the organization. The strategy formulation for the development of the Gayo coffee agroindustry is carried out using a SWOT analysis. At the data collection stage, an analysis of the company's internal (IFE) and external (EFE) environments was carried out. The Internal Factor Evaluation Matrix can be developed in five steps. The stages are as follows:

List the main internal factors as mentioned in the internal audit process. Include 10 to 20 factors, including organizational strengths and weaknesses. Determination of importance and weights. To determine the importance of each item, the statement was made to the parties who were considered to know the most about the coffee agro-industry system in Bener Meriah Regency. Respondents who are considered to know the most about this are: farmers who operate the coffee agro-industry system and parties who are competent in decision-making within the relevant agencies in Bener Meriah Regency. The method used to answer the statement posed based on the importance of each question item, as mentioned above, is to use a Likert scale with the choice criteria, namely: *Very Important*, given a score of 5; *Important* is given a score of 4; *Average* was

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given a score of 3; *Not Important* was given a score of 2; and *Very Unimportant* were given a score of 1.

Table 3.4.a. Calculation of Weights in EFE Analisis Analysis

No.	Internal	SCORE	WEIGHT	TOTAL
Strength				
1.				
2. Etc				
Total				
Weakness				
1.				
2. etc				
Total				
Difference in Total Strength-Total Weakness = S – W				

Source: David, 2011

NO.	External	SCORE	WEIGHT	TOTAL
Opportunity				
1.				
2. Etc				
Total				
Treatth				
1.				
2. Etc				
Total				
Difference in Total Opportunities-Total Challenges = S – W				

Source: David, 2011

To determine the amount of weight on each statement item, it is determined based on the level of importance, namely the total number of important values for each strategic environmental factor (strengths, weaknesses, opportunities and threats). Suppose, the power factor has 5 (five) statement items, then the sum of the five significant values of the statement items is the divisor for each of the significant values of each question item. Likewise for the factors of weakness, opportunities and threats.

- Assign a rating of 1 to 4 to each factor to indicate whether the factor is very weak (rating = 1), weak (rating = 2), strong (rating = 3), or very strong (rating = 4).
- Multiplying the weight of each factor by its rating to determine the weighted score for each variable.
- Adding up the weight scores of each variable to obtain a total weight score.

Table 3.4. b . Determination of SWOT Matrix (strengths, weaknesses, opportunities, threats)

External	Strength (S) Strength factor	Weakness (W) Weakness factor
Internal		
Opportunity (O)	S – O Strategies that use strengths to take advantage of opportunities	W – O Strategies that minimize weaknesses and take advantage of



factor		opportunities
Threat (T)	S – T	W-T
Threat factor	Strategies that use strength to overcome threats	Strategies that minimize weaknesses and avoid threats

Source: David, 2001

After mapping the strategy through SWOT analysis, the next step is to determine the quadrant through the *Strategic Position and Action Evaluation_SPACE Matrix*. SPACE Matrix is a strategic tool that focuses on strategy formulation especially those related to the competitive position of the company. The axes for the SPACE matrix are based on four areas of analysis, namely : *Internal and external strategic dimensions*. These four factors are the most important determinants of the overall strategy. The SPACE Matrix diagram is shown as follows:

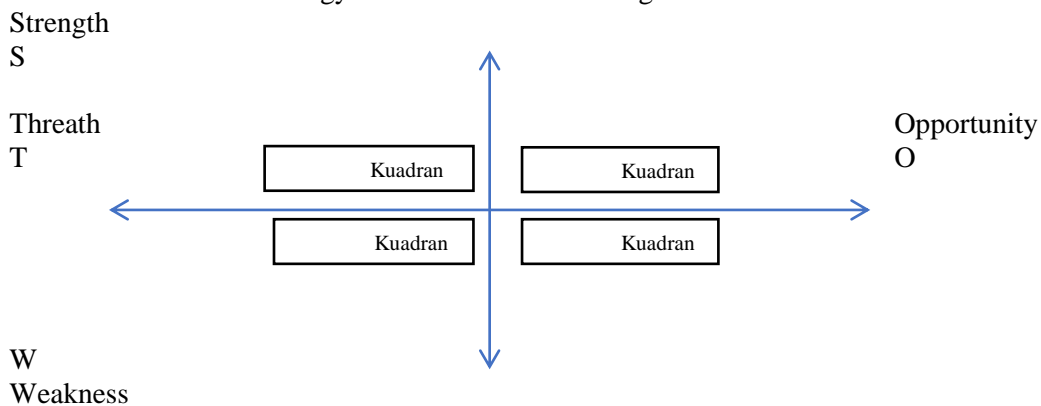


Figure 1. SWOT . Space Matrix

2.RESULTS AND DISCUSSIONS

To be able to develop the right strategy in order to achieve the targets or strategies that have been implemented, it is necessary to determine the internal and external factors that will be analyzed using the IFE-EFE table. The internal factors used in the IFE-EVE analysis in this study are:

Coffee is one of the commodities that is the main production target for the Cooperative in its distinctive aroma and taste . (Tambarta, 2016). The name Gayo Arabica coffee arises because the Arabica coffee with the best taste comes from the Gayo highlands, namely the districts of Central Aceh and Bener Meriah as shown in the following picture: Aceh. Aceh coffee which is known internationally is the type of Gayo Arabica coffee .

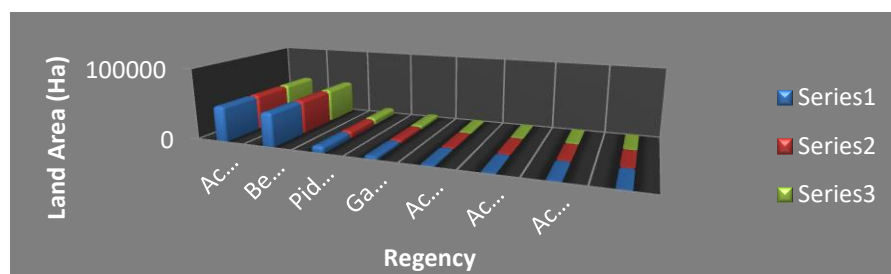


Figure 3. Graph of Coffee Areas in Aceh Province for the Last Five Years

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The graph above shows that there are eight districts that are centers of coffee production in Aceh Province. Central Aceh and Bener Meriah districts are production centers with the largest land area among the six districts (BPS Aceh Tengah, 2020). The area of coffee plantations in Bener Meriah Regency in 2018 was 46.27 ha with a production of 30,408 tons, in 2019 it was 46,273 ha with a production of 29,101 tons and in 2020 it was 46.27 ha with a production reaching 29,000 tons. With a proportion of 90% Arabica coffee land area and 10% robusta coffee (BPS Bener Meriah, 2020).

The production process of Gayo coffee products must be considered starting from the cultivation aspect to the processing process to produce the highest quality product. Therefore, it is necessary for the role of stakeholders who have high integrity to ensure the operation of a good cultivation system with the application of GAP (Good Agriculture Practice in every aspect of coffee cultivation. The Conception of GAP Technical Guidelines must of course refer to the concept of sustainable agriculture, namely successful resource management for agricultural businesses in meeting changing human needs and at the same time maintaining or improving the quality of the environment and conserving natural resources. GAP is carried out with standard work in every agricultural business so that the resulting production can meet international standards. This standard must be made in manual form (which of course will be continuously corrected) that will be applied by farmers. The desired result is agricultural production that is in accordance with the standards that have been set. Coffee stakeholders in Central Aceh such as cooperatives, MPKG Gayo, the agriculture office, and the plantation office have proven to be very instrumental in improving the quality of processed coffee products that are marketed either in the form of green beans or coffee powder. Stakeholders have a role as quality control. The role of stakeholders is carried out in the form of: 1) setting GAP cultivation standards for farmers, 2) providing training to increase production, maintenance, technology and quality, 3) providing technological assistance to farmers, 4) protecting coffee farmers' rights, and 5) providing sanctions given if they do not follow the standard, the farmer's coffee beans will be rejected (rejected by the market).

Coffee taste can be tested by organoleptic test (cupping test). This test is one of the quality assessment systems for commodities that use human senses such as hands, tongue, ears, and eyes as measuring instruments. The person who performs the organoleptic test is referred to as a panelist. Panelists are tasked with measuring and assessing the characteristics of coffee such as acidity, clarity of taste, fragrance and so on. This test is very popular with coffee producers and marketers because it is able to provide clarity about the unique taste characteristics of the various types of coffee available. In this case, the panelist acts as a measuring tool. A good panelist is a panelist who is sensitive and consistent. Panelists' sensitivity includes the sensitivity to recognize, differentiate, and compare the characteristics of certain coffees. After testing the coffee, the cupping form will produce a certain score for the various types of coffee being tested. A score range of 6-7.75 indicates that the coffee is of fairly good quality, while a score exceeding 8.00 is said to be specialty coffee. The taste of Gayo Arabica coffee beans is well known in the world market with a cupping score above 80. The characteristics of the Gayo coffee taste are: - an average cupping test value above a score of 80, - free from major flavor defects, - clean sour taste from moderate to high levels, - little or no bitter taste detected - strong aroma quality and intensity.

Gayo coffee has entered a modern market system, where the marketing of this commodity no longer only relies on its physical form and taste, but has developed on matters relating to farming methods, for example organic or non-organic, damaging the environment. or does not damage the environment, as well as product identity (farmers, and farming areas). Some of the certifications that have been obtained by Gayo coffee commodities and farmers are: Geographical indications are a form of legal protection and intellectual property rights (IPR) granted by a country to people who inhabit a certain geographical area because the products produced in that area have quality and are characterized by the influence of geographical factors. This certification is carried out on the way the production process is carried out starting from nurseries, land preparation, garden management, post-harvest management to storage in warehouses ready for export. The principle focuses on the



importance of preserving the environment. Organic farming systems do not allow the use of genetically engineered seeds or non-organic fertilizers and pesticides. In the provisions of the fair trade certificate, it is more important to prioritize social and economic aspects, especially regarding the distribution of the price difference (margin) which must reach the farmer level as a producer of coffee beans. Fair-trade certificates pay attention to efforts to strengthen farmer institutions, education of farmers' children, health facilities, child labor and labor wages;

The applied agro-industry development is sustainable agro-industry development that is environmentally friendly. The agro-industry that is built and developed must pay attention to the management and conservation aspects of natural resources as a form of Indonesia's comparative advantage. All the technology used and the institutions involved in the development process need to be directed to encourage environmentally friendly socialization. The coffee processing technology in Central Aceh is classified as environmentally friendly technology because it does not produce waste that can damage the environment.

Gayo coffee beans have a sweet orange taste, honey aroma and taste, as well as a thick body with a long aftertaste so that this product has a strong position in the coffee bean trade. Gayo coffee beans are often used as a base body for processed coffee products, especially types of processed drinks. Gayo Arabica coffee beans will be mixed with other Arabica coffee beans with a percentage of 30%: 70%. This is because the level of viscosity and after taste of Gayo Arabica coffee is higher than other types of coffee.

These various strength factors will greatly affect the condition of the development of Gayo coffee products in Central Aceh. Availability of raw materials is limited, the condition faced by the Gayo Arabica coffee agroindustry today is the limited availability of good quality raw materials. This is because there are still many coffee farmers in Central Aceh who use pesticides and chemical fertilizers which will affect the quality of coffee. These chemicals will cause chemical residues that will cause the quality of the coffee to decrease. The worst impact is that the coffee beans will be rejected by the international market. In addition, the Central Aceh region, which is mostly a protected forest area, will greatly affect the availability of raw materials in this area. Protected forests may not be cut down while the maximum land area is used for coffee plantations. This makes it difficult for stakeholders to increase production to maintain the availability of coffee raw materials.

Low skills to master green bean processing technology in accordance with the times. Coffee farmers usually do not receive high education so that the ability to absorb existing technology (innovation) cannot develop quickly. Most of the workforce in Central Aceh and Bener Meriah Regencies are still classified as not having mastered the skills for the harvest process to post-harvest processing. Until now, the skill of processing Gayo Arabica coffee products is still dominated by coffee beans and a small part of ground coffee. The resulting ground coffee is usually marketed for personal consumption so that not much is spread outside the region. The technology used is not updated/still simple technology, the coffee grain milling process is one aspect that needs to be strengthened in the development of the coffee powder industry in the Gayo Highlands. The potential for diversification of Gayo Arabica coffee products in Central Aceh is actually very large, but technology and capital are still obstacles that exist in the people of Central Aceh. Huller manufacturing industry (grain grinder) has started to exist, but the quality and production is still limited (production according to order).

The quality of the green beans of Gayo Arabica coffee has not met the quality/quality limit in accordance with the International coffee trade SOP because there are still many farmers who use chemicals in coffee maintenance activities. Until now, many farmers use chemicals such as chemical pesticides and chemical fertilizers in their maintenance activities. coffee so that the coffee beans contain harmful chemicals. This often causes Gayo Arabica coffee processed products to be rejected by the international market. Lack of farmer skills in carrying out promotional activities for processed products that have not yet reached the times (revolutionary era 4.0-5.0). The role of

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humans is shifted by technology so that it changes the way people work, work, and relate to one another. This also happens in the world of product promotion which will continue to grow rapidly.

Handling of unstructured production and harvesting, resulting in poor green bean taste, most of the workforce in Central Aceh and Bener Meriah Regencies are still classified as not having mastered the skills for handling *cherry products*. unstructured red. For example, there is no policy for picking red fruit. The process of picking beans often involves green beans and yellow beans which can affect the quality and taste of the coffee beans themselves. Many of the farmers are pursuing the target of quantity rather than quality. This will cause a decrease in the taste of Gayo Arabica coffee itself. The various strength and weakness factors above will be analyzed using the IFE (Internal Factor Evaluation) calculation table to show the company's internal conditions as shown in the following table:

Table 4.1. Calculation of IFE (Internal Factor Evaluation) of Gayo coffee processed products

Internal Strategy Factor	Weight	Rating	Score (Weight x Rating)
Strength			
The main production center for green bean products in Aceh	0 .104	5	0.519
Having stakeholders who focus on producing green coffee beans with good quality, such as cooperatives, MPKG Gayo, the agriculture office, and the plantation office.	0 .079	3.8	0.300
Excellent taste because it has a cupping score exceeding 80	0 .095	4.6	0.439
Have IG certification, Organic or the like	0 .083	4	0.332
The technology used is environmentally friendly	0 .079	3.8	0.300
Green Bean Gayo Arabica coffee is used as a body/base mixture in processed coffee drinks in various international downstream industries	0 .100	4.8	0.478
Sub-Total			2,367
Weakness			
Availability of raw materials is still limited	0 .100	4.8	0.478 0083
Low skills to master green bean processing technology in accordance with the times	0 .091	4.4	0.401 65975
The technology used is not updated / still simple technology	0 .050	3.6	0.179 25311
The green bean quality of Gayo Arabica coffee has not met the quality/quality limit in accordance with the International coffee trade SOP.	0 .058	4.2	0.243 9834
Lack of farmer skills in carrying out promotional activities for processed products that have not yet reached the times (revolutionary era 4.0-5.0)	0 .075	4.6	0.343 56846



Handling of unstructured production and harvesting, resulting in a poor taste of green beans	0 .087	4	0.348 54772
Sub-Total	1		1995
Difference S-W			0.372

The external factors that will affect the development of Gayo Arabica coffee products in Central Aceh are: the international market demand is very high, the proportion of Indonesian coffee export allocation shows that the United States, Germany and Japan are still the main destination markets for Indonesian exporters. High demand is inseparable from the challenges that must be faced by Indonesian exporters. Gayo coffee is quite famous in the world because it has a distinctive aroma and enjoyment. Despite the crisis in Europe, it has not reduced the demand for coffee from the Tanah Gayo highlands in the world market. Opportunities exist to develop processed coffee products that pay attention to aspects of management and conservation of natural resources.

Lifestyle trend of young people is identical to the "Coffee" culture. "Coffee" is one of the habits that are often done by people in general. It is as if this tradition has been embedded as a way of life that is developed and shared by coffee lovers. "Coffee" is one of the cultures that can never be separated from people's lives, even the existence of coffee shops or coffee shops is increasingly entrenched on the sidelines of boring daily activities. Lifestyle is assumed to be a feature of a modern world or what is also known as modernity. This culture will be an opportunity to develop various processed coffee products such as green beans and coffee grounds. The higher the level of coffee culture, the more green beans and coffee grounds are needed.

Increased public awareness that arabica coffee is healthier than robusta coffee, technological developments will result in the development of science. This will have an impact on people's lifestyles. Nowadays, more and more people are enjoying a healthy lifestyle. Especially related to the pattern of coffee consumption as a daily drink. Many people have realized that Arabica coffee is much healthier than other types of coffee such as Robusta and Liberica. This is in line with research by Aryadi (2020) which shows that the highest caffeine content comes from Robusta coffee at 2.15%, the second comes from Arabica at 1.77% and the third comes from Liberica coffee at 1.32%. This factor is an opportunity for the development of Gayo Arabica coffee processed products.

Gayo coffee brand that has been worldwide, Gayo coffee is quite famous in the world because it has a distinctive aroma and enjoyment and when *cupped* or taste test. Even though there was a crisis in Europe, it did not reduce the demand for coffee from the Gayo highlands in the world market. This will certainly be an opportunity for the development of Gayo Arabica coffee processed products.

With the ease of facilities for world-class promotions, the digital era changes various business promotion activities both in the individual and environmental spheres. Various promotional activities can be carried out using applications and networks. In this digital era, there are many applications that can be used as promotional media, such as promotional videos, websites, and other advertising applications. This will certainly be an opportunity for the development of Gayo Arabica coffee processed products.

The increase in the downstream industry that produces processed coffee products, the phenomenon of coffee culture for young people will certainly lead to an increase in the downstream industry that produces processed coffee products. Especially processed coffee beverage products. Nowadays, being an entrepreneur who owns a café is an extraordinary achievement for the younger generation. Many young people choose to leave their regular jobs (office) to open a cafe/coffee shop business. This of course will be an opportunity for the development of Gayo Arabica coffee processed products in Central Aceh as one of the production centers in Aceh.

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Furthermore, the factors that become a threat variable for the development of processed Gayo Arabica coffee products are as follows:

The existence of climate change which causes limited land potential and raw materials, weather changes that occur in Aceh Tengah and Bener Meriah Regencies are currently very uncertain (extreme). The intensity of rainfall and the intensity of the sun's heat can no longer be predicted. This is the main threat from the development of Gayo Arabica coffee. Unpredictable weather can reduce the productivity of coffee produced by cooperative fostered farmers. Bad weather such as heavy rain can cause damage to coffee plants, which of course can reduce the quality of coffee beans supplied from the supplier. This unpredictable thing can lead to limited quality raw materials.

SOP High product quality from the international market due to an increase in food safety regulations such as a hygienic production process. SOP High product quality from the international market has also experienced an increase in food safety regulations such as hygienic production processes (food processing using gloves and masks, chemical levels and levels of bacterial contamination, etc.). This will certainly be a threat because the readiness of our farmers in processing Gayo Arabica coffee products is still very low. Many farmers do not use masks and gloves in carrying out coffee product processing activities every day.

The high international quality standards will be a threat to the development of Gayo Arabica coffee products. There are two standards that serve as guidelines for the physical test, namely the Indonesian National Standard (SNI) and the Specialty *Coffee Association of America* (SCAA) *Standard*. Coffee standards for export : 1) moisture content 10-12%; 2) the maximum number of defects is 5 and free from primary defects and hazardous chemical content; 3) in *roasting beans* there is no quicker; 4) cupping score of at least 80; 5) seed uniformity reaches 95%.

Fluctuating international green bean coffee prices, Gayo Arabica coffee prices still depend on world coffee prices. This of course will result in the instability of coffee prices every day. The price of Gayo Arabica coffee usually reaches Rp. 50,000 to Rp. 90,000 when converted in rupiah. The instability of Gayo Arabica coffee prices will certainly have a very significant impact on the economic conditions of Gayo Arabica coffee business actors. This will certainly be a threat to the development of Gayo Arabica coffee products.

Complexity of the process of arrival of potential consumers to Indonesia after the pandemic, marketing conditions before the COVID-19 pandemic allowed buyers to come and see freely the coffee processing activities in several coffee businesses/factories in Takengon. However, since the COVID-19 pandemic, this activity is very difficult/limited to do. Buyers from export destination countries must carry out various health procedures such as mandatory swab tests before leaving for Indonesia, must wear masks, and must maintain distance when arriving in Indonesia. The complexity of the process for the arrival of potential consumers to Indonesia after the pandemic can pose a significant threat to the development of Gayo Arabica coffee products. Technological developments towards the 5.0 revolution era, technological developments will be a threat due to the lack of readiness of Gayo Arabica coffee farmers skills in absorbing technological developments towards the 5.0 revolution era. The level of internet network readiness in this area is also still very low. On the other hand, various other Arabica coffee producing countries have processed coffee products using renewable technology. This lag will clearly be a very dangerous threat to the development of Gayo Arabica coffee products.

Increased production in other coffee producing countries such as Brazil and Colombia. The existence of major producing and exporting countries such as Brazil and Colombia has also been a threat and a challenge for Indonesia's coffee exports. On the other hand, the emergence of new competing countries that produce similar products makes it more difficult to develop the coffee market both in traditional export destination countries (United States, Germany and Japan) and new export destination countries (potential development areas) specifically in the Asian region. The various opportunities and challenges above will be analyzed using the EFE (External Factor



Evaluation) calculation table to show the company's external conditions as shown in the following table:

Table 4.2. EFE Calculation

External Strategy Factors	Weight	Rating	Score (Weight x Rating)
Opportunity			
Very high international market demand	0.0 93	5	0.465
The trend of young people's lifestyles that are synonymous with the "Coffee" culture	0.0 86	4.6	0.393
Increased public awareness that Arabica coffee is healthier than Robusta coffee	0.0 71	4.6	0.325
Gayo coffee brand that has been worldwide	0.0 86	5	0.428
There are easy facilities for world-class promotions	0.0 67	2.8	0.187
Increasing downstream industries that produce processed coffee products	0.0 86	4	0.342
Sub-Total			2,140
Threat			
The existence of climate change that causes limited land potential and raw materials	0.0 93	5	0.464 68401
SOP High product quality from the international market due to an increase in food safety regulations such as hygienic production processes (food processing using gloves and masks, chemical levels and levels of bacterial contamination etc.)	0.0 89	4.8	0.428 25279
Fluctuating international green bean coffee prices	0.0 86	4.4	0.376 20818
The complexity of the process for the arrival of potential consumers to Indonesia after the pandemic	0.0 86	4.6	0.393 30855
Technological development towards the revolutionary era 5.0	0.0 74	4	0.297 39777
Increased production in other coffee producing countries such as Brazil and Colombia	0.0 86	5	0.427 50929
Sub-Total	1		2.387 36059
Difference OT			-0.248

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3.CONCLUSIONS

The conclusions of this study are:

The internal factors of the development of processed Gayo Arabica coffee products are: a) Strength factors which consist of the main production center for green bean products in Aceh; have stakeholders who focus on producing green coffee beans with good quality; excellent taste; have certification; the technology used is classified as environmentally friendly; Gayo Arabica coffee beans are used as a body in processed coffee drinks, b) weakness factors consisting of limited availability of raw materials; fluctuating international green bean coffee prices. the technology used is still simple technology; the quality of the green bean of gayo arabica coffee has not met the quality/quality limit in accordance with the international coffee trade soup; promotion of green beans that have not yet reached the development of the industrial revolution 4.0 ; handling of production and harvest that has not been structured so as to produce a green bean taste that is not good .

External Factors which are divided into: 1) Opportunity Factors which consist of: very high international market demand; the trend of young people's lifestyles that are identical to the "coffee" culture; increasing public awareness that Arabica coffee is healthier than Robusta coffee; Gayo coffee brand that has been worldwide; the ease of facilities for world-class promotions; increase in downstream industries that produce processed coffee products, 2) Threat factors consist of climate change which causes limited land potential and raw materials; an increase in food safety regulations such as a hygienic production process; high quality product soup from the international market; the complexity of the process for the arrival of potential consumers to Indonesia after the pandemic; technological developments towards the 5.0 revolution era; increased production in other coffee producing countries such as Brazil and Colombia .



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