ISSN (Online) 2456 -1304

International Journal of Science, Engineering and Management (IJSEM)

Vol 10, Issue 4, April 2023

Cocoa Industry Development to Fulfill the Global Market Share

(Study at PT. Kalla Kakao Industry, Southeast Sulawesi, Indonesia)

[1] Ebed Hamri Koodoh, [2] Mirad, [3] Haydir, [4] Idham Handa, [5] Hasddin

[1] Human Resources Development Agency (BPSDM), Southeast Sulawesi Province, - Urban Regional Planning Study Program, University of Lakidende, Indonesia
[2] Faculty of Social and Business, Mandala Waluya University, Indonesia
[3][4][5] Urban Regional Planning Study Program, University of Lakidende, Indonesia
Email: [1] nickhamri@gmail.com, [2] muhamadidham1984@gmail.com, [3] laodemirad22.kendari@gmail.com, [4] hasddinunilaki@gmail.com

Abstract*— This research tries to reveal how the development of national cocoa production. next is to reveal the management of cocoa bean processing by PT. Kalla Cacao Industry, and most importantly how to formulate a strategic model to develop the national cocoa industry by taking studies at PT. Kalla Cacao Industry. The results of the analysis show that the development of the national cocoa industry is very promising for business actors, because there is an imbalance between the number of world market demands and the amount of production. As the world's third largest cocoa producing country, Indonesia plays an important role in global cocoa. The national cocoa industry through PT. Kalla Cacao Industry in meeting the demand for the export market in accordance with the standards and/or specifications of SNI 2323/2008/2010 so as to produce export products. However, there needs to be improvement by increasing product competitiveness; increase in partner human resources (farmers); institutional capacity building and upstream-downstream partnerships; synergy with related parties; as well as plant rejuvenation and development (area) of plantations as a production base.

***Index Terms*— Cocoa, Industry, Strategy**

I. INTRODUCTION

Cocoa (*Theobroma cacao* L) is a commodity that is widely used in the industrial world and can be processed into various products. The main products of cocoa beans are cocoa powder and butter which can be processed into a variety of new products with high economic value.

Cocoa consumption in the world in the last decade has shown an increasing number, on the other hand cocoa production has decreased, not directly proportional to the amount of demand. ICCO (International Cocoa Organization) predicts that world cocoa consumption will be higher than production, because cocoa production around 2012 was around 4.1 million tons and in 2021 reached 5.1 million tons [1], meaning that it only grew 2. 2%. Concerns arise when compared to the average growth in world cocoa demand and/or consumption. During 2007-2012 the demand for cacao was around 2.7% per year, so that ICCO estimates that in the long term (2013-2022) there will be a world cocoa deficit of around 10-50 thousand tons every year due to higher consumption.

World cocoa production is contributed by 7 major countries, 3 of which are Ivory Coast, Ghana, and Indonesia [2], and [3]. In the last three years, Indonesia's production contribution to the world has been between 14-15% [4], [5], [6], [7].

Cocoa plantations in Indonesia as an export commodity among other plantation commodities. Export destination countries for Indonesian cocoa beans spread to various countries. The Ministry of Industry of the Republic of Indonesia [8] reports that the largest cocoa export market is Malaysia, around 47%, the United States 21%, Singapore 12%, Brazil 7%, China/China 4%. Other export destination countries are Germany, India, the Netherlands and the Philippines [9], and [2].

Indonesia's cocoa exports in 2017 contributed US$ 1.2 billion in foreign exchange, then in 2015 around US$ 1.3 [9]. This means that the export value of Cocoa has decreased. The decline in export value is closely related to the decrease in the amount of cocoa bean production.

Cocoa production in Indonesia mostly comes from smallholder plantations (95%), and the rest comes from companies. Even Schaad & Fromm [10] stated that 90% of them (out of 95) are cultivated by small farmers. Their average income is less than 2.50 USD/day [11]. This means that Indonesian Cocoa is very dependent on the ability of farm management which is synonymous with low management capacity compared to industrial scale management. This is one record of improving the management of Indonesian Cocoa in the future.

Cocoa plantations in Indonesia are found in all regions, but the largest are in the Sulawesi region with a production contribution of more than 60% of national production. One of them is in Southeast Sulawesi Province, with cocoa

ISSN (Online) 2456 -1304
International Journal of Science, Engineering and Management (IJSEM)
Vol 10, Issue 4, April 2023

production of around 20% of national production [12].

Cocoa plantations in Southeast Sulawesi Province are spread across several districts such as Kolaka Regency, South Konawe Regency, Konawe Regency, North Konawe Regency, North Kolaka Regency, Buton Regency, Muna Regency, Wakatobi Regency and North Buton. In the case of Southeast Sulawesi, the majority of cocoa plantations are managed by the community or come from smallholder plantations. The currently managed industrial scale that is actively operating is PT. Kalla Cacao Industry. This company does not have its own development land, but takes/gives from the community, either through direct or partnership schemes.

Observing the development of national and Southeast Sulawesi cocoa bean production in the past decade, production has decreased, followed by a decline in exports. For writers, the presence of the cocoa industry PT. Kalla Kakao Industri, which is located in South Konawe Regency, is considered a new hope in answering the facts described above. Finally, this research tries to reveal how the development of national cocoa production. next is to reveal the management of cocoa bean processing by PT. Kalla Cocoa Industry, and most importantly how to formulate a strategic model to develop the national cocoa industry by taking studies at PT. Kalla Cacao Industry.

II. LITERATURE REVIEW

A. Cacao (Theobroma cacao L)

Theobroma cacao L is the biological name given to the cacao tree by Linnaeus in 1753. The natural place of the genus Theobroma is in parts of tropical forests with lots of rainfall, high humidity levels, and shade. Under these conditions, Theobroma cacao can bear fruit and produce sufficient and even abundant seeds [13].

According to Wahyudi et al., [14], there are only 3 types of the most widely planted for cocoa production, namely:

1. Criollo type. The Criollo type consists of the Central American Criollo and the South American Criollo. This type produces cocoa beans of very good quality and is known as noble cocoa. The fruit is red or green, the fruit skin is thin and rough and soft nodules. The fruit seeds are oval and large in size with white cotyledons when wet;
2. Forastero type. This type produces medium-quality cocoa beans, also known as Ordinary cocoa. The fruit is green, the skin is thick, the seeds are thin or flattened and the cotyledons are purple when wet; and
3. Trinitario type. This species is a mixture of Criollo and Forastero species. Trinitario chocolate produces seeds that are classified as fine flavored cocoa and some are classified as bulk cocoa. The fruit is green or red and has various shapes. The fruit seeds also vary with light purple to dark purple cotyledons when wet.

Cocoa plant taxonomy according to [15], is as follows: (a) Division: *Spermatophyta*, (b) Class: *Dicotyledoneae*, (c) Nation: *Malvales*, (d) Family: *Sterculiaceae*, (e) Genus: *Theobroma*, (f) Species: *Theobroma cacao. L*. According to Wahyudi, et al [14], the shape of the fruit and the skin color of the cocoa pods vary greatly, depending on the cultivar. However, basically there are only two kinds of colors, namely: 1) The fruit when it is young is green/green rather white, when it is ripe it is yellow, and 2) The fruit when it is still young is red, when it is ripe it is orange.

B. Cocoa Industry Development Strategy

The key concept in strategic management is strategy. The term strategy comes from the Greek strategos, meaning general or general [16]. In military terms, strategy includes the planning and directing of battles or campaigns on a wide scale, for which the general is responsible. In this context, strategy is distinguished from tactics, which include the initiation of actions to achieve medium-term goals. In the business world, strategy is often used to refer to specific actions to counterbalance the actual or potential actions of competitors.

Strategy is a process of determining top leaders' plans that focus on the long-term goals of the organization, accompanied by the preparation of a method or effort to achieve these goals. Steiss [16], defines the concept of strategy as a conceptualization, expressed or implied by the leadership of the organization, regarding: (1) long-term goals or objectives of the organization, (2) constraints and general policies, which currently hinder the scope organizational activities, and (3) the current set of short-term plans adopted in the estimates of the contribution to achieving the goals of the organization.

Thompson and Strickland in [16], argued that the goals and ends of the strategy are the means to achieve them. Strategy is a pattern of actions implemented by managers to achieve strategic targets and financial performance. The definition of strategy according to Bryson [17], is a pattern of goals, policies, programs, projects, actions, decisions, or resource allocations, which define what an organization is about, what it does, and why it does it. Based on this definition, strategy is an extension of the organization's mission, and a bridge between the organization and its environment. Meanwhile, according to Hill & Jones [18], strategy is a set of interconnected actions taken by managers to improve organizational performance.

Based on this description, strategy can be defined as a pattern of actions by organizational leaders to achieve goals related to optimal organizational performance. Hill & Jones [18] said that the strategy implemented by the leadership of an organization has a major impact on the performance of the organization relative to the performance of its competitors.

Integrating the main objectives, policies and series of actions in an organization into a unified whole. A well-formulated strategy will help organize and allocate the company's resources into a unique and sustainable form. A good strategy is prepared based on the company's internal capabilities and weaknesses, anticipating changes in the environment. Every company or organization, especially services, aims to provide good service to its customers.

ISSN (Online) 2456 -1304
International Journal of Science, Engineering and Management (IJSEM)
Vol 10, Issue 4, April 2023

Therefore, every company or organization's strategy must be directed towards customers. This is as explained by Hamel & Prahalad [19], saying that strategy is an action that is incremental (always increasing) and continuous, and is carried out based on the point of view of what customers expect in the future. Strategy almost always starts with what can happen and not with what happened. For example, a strategy might direct the organization toward reducing costs, improving quality, and expanding markets. The speed of innovation in new markets and changes in consumer patterns requires core competencies.

Based on the various opinions mentioned above, it can be concluded that strategy preparation must pay attention to the goals and objectives to be achieved in the future, besides that an organization must always interact with the environment where the strategy will be implemented, so that the strategy is not contradictory but in the same direction and in accordance with the conditions environment and look at internal and external capabilities which include the strengths and weaknesses of the organization. Hill & Jones [18] say that strategy is important because organizations operate in a competitive environment and resources are scarce.

III. METHODS

This research was conducted in Southeast Sulawesi by taking a special study in an effort to develop industrial scale businesses at PT. PT. Kalla Cacao Industry. The object of this study was determined purposively based on the author's subjective considerations.

The focus (object) of analysis in research is by analyzing the development of Indonesian Cocoa production using secondary data (study review). The information needed to create a strategy based on data is in the form of:

1. Cacao plantation business in Southeast Sulawesi, covering aspects of: a) Cocoa Farming, b) Land area, and c) Total production and productivity;
2. Management of cocoa bean processing at PT. Kalla Cacao Industry, including: a) Raw materials, b) Transportation, and c) Products and Markets; and
3. Factors supporting and inhibiting the development of the cocoa industry, including the following aspects: a) Internal; strengths and weaknesses, and b) External; opportunities and threats.

Data analysis in this study was carried out using a descriptive approach assisted by a SWOT matrix to reflect strengths, barriers or weaknesses, threats and opportunities (IFAS-EFAS).

IV. RESULTS AND DISCUSSION

A. World Cocoa Production

International Cacoa Organization (ICCO) as reported by [1]; and [20] that world cocoa production in 2021 is estimated at 5,141 million tonnes. This amount generally comes from countries in Africa reaching 60-70% of total global production. Released that the country of Ivory Coast is the largest contributor to the world's cocoa production with a contribution of around 43% of world production. In 2021 Ivory Coast Cocoa production will reach 2.225 million tonnes. Other countries are each of which Ghana produces cocoa during 2021 reaching 1 million tons, Ecuador with a total production of around 350,000 tons, Cameroon with a total production of around 290,000 tons, and Nigeria produces around 270,000 tons of cocoa. Other parts of the world, precisely in America, were donated by Brazil. In 2021, Brazil will produce around 210,000 tons of cocoa beans [1].

Based on the above data, Indonesia's cocoa production ranks third in the world, below Ivory Coast and Ghana. This fact is in line with what was reported by [5]; and [6] it's just that his contribution to the world is starting to decline. In 2021 Indonesia's cocoa production is around 706,500 tons [21], while Ivory Coast is around 2.225 million tons, and Ghana is 1 million tons. Information on the world's largest cocoa production in each country is presented in full in the infographic in Figure 1.

Ivory Coast contributes around 44% of total world cocoa production (5,141 million tonnes), then Ghana 20%, and Indonesia itself contributes around 14%. The other four countries contributed <10%.

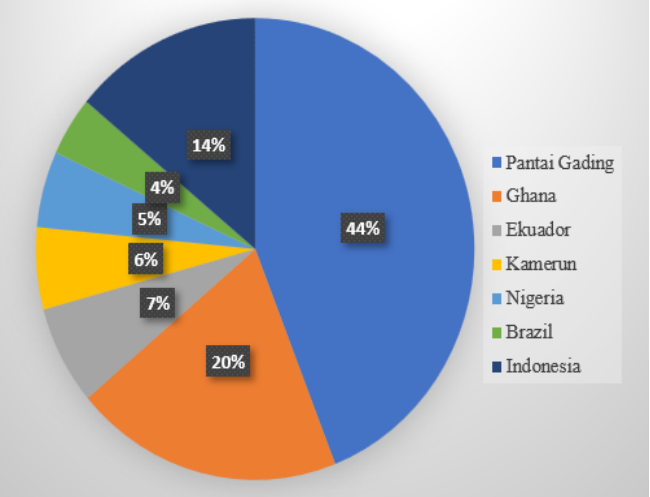

Figure 1. The Largest Cocoa Producing Country in the World

B. Indonesian Cocoa Production

According to data released by the Central Bureau of Statistics (BPS) of the Republic of Indonesia, it is known that in the last decade cocoa production has fluctuated (up and down). This can be seen from the total cocoa production in 2011 of around 712,200 tons, increasing to 740,510 tons in 2012. Then in 2015 it dropped dramatically to break the 593,300 ton mark. Indonesian cocoa production in 2018 increased quite significantly, namely 767,400 tons, and decreased again in 2021 to 706,500 [21]. The development of Indonesian Cocoa production is presented in Figure 1 below,

ISSN (Online) 2456 -1304

International Journal of Science, Engineering and Management (IJSEM)

Vol 10, Issue 4, April 2023

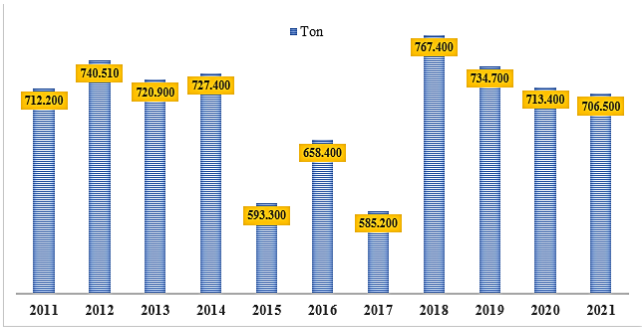

Figure 2. Development of Indonesian Cocoa Production in 2011-2021

The amount of Indonesian cocoa production comes from Sulawesi. The largest production was in Central Sulawesi Province, around 130,600 tons, Southeast Sulawesi Province, 114,800 tons, South Sulawesi Province, 107,100 tons, and West Sulawesi Province, 70,900 tons [21].

Other cocoa-producing areas (not so large compared to Sulawesi) are in parts of Sumatra such as Lampung Province around 54,800 tons, Aceh Province 40,900 tons, then West Sumatra Province, and North Sumatra [21]. The distribution of cocoa-producing areas is presented in Table 1.

Table 1. The Largest Contributing Regions to Cocoa Production in Indonesia, 2021

Province	Amount (ton)	National (ton)	(%)
Central Sulawesi	130.600	706.500	18,49
Southeast Sulawesi	114.800		16,25
South Sulawesi	107.100		15,16
West Sulawesi	70.900		10,04
Lampung	54.800		7,76
Aceh	40.900		5,79
West Sumatra	40.200		5,69
North Sumatra	35.900		5,08

The data shows that around 60% of Indonesia's cocoa production is produced from the Sulawesi region. Furthermore, about 24% is produced from the Sumatra region, and only 16% is produced from other regions of Indonesia.

Indonesia's challenge is that the cocoa production trend in the last five years has shown a decline (see Figure 2). This has the consequence of decreasing its contribution to world production. In 2018 Cocoa production contributed around 15% of total world production [22], and [7]. In 2021 it will decrease to 14% (see Figure 1).

Tracing from secondary data, BPS [23] released that cacao producers in Indonesia sourced from the Sulawesi region, around 87%. Compared to 2021 (24%), there has been a significant decrease to 63%. Southeast Sulawesi cocoa production also decreased. In 2015 it was 20%, in 2021 it will be 16%, or for 6 years it has decreased by 4% or 0.67%/year.

C. Processing Management of Cocoa Beans at PT. Kalla Cacao Industry

1. Raw Material

Cocoa raw materials processed at PT. Kalla Cacao Industry is generally sourced from the region of Southeast Sulawesi Province. Areas with the most cocoa production included in the company come from North Kolaka, East Kolaka, Kolaka, Konawe, Konawe, South Konawe Regencies, and even in island areas such as Muna/West Muna Regencies. The highest amount of cocoa production was in North Kolaka Regency around 87,703 tons/year, East Kolaka around 79,276 tons/year, Muna/West Muna Regency area around 12,612 tons/year, Konawe around 10,172 tons/year and South Konawe around 8,989 tons/year, while other areas below this number, such as in several areas in the Buton archipelago.

Each cocoa bean received at the company must comply with the standards or specifications according to SNI 2323/2008/2010, where the raw material requirements for cocoa beans are a water content of around 4-7.5%, the weight of the beans is around 115/100 gr. Every kilogram of cocoa beans has a deviation limit (dirt and foreign matter) of around 3% or for damaged or pest-infested beans the tolerance limit is around 2%. In accordance with these standards, the results of observations and information collected show that in one unloading of about 20 tons (one truck), the quality of the cocoa beans that enter the company is in accordance with the company's standards, on average ranging from 70-85% of which have met the standards, and it doesn't show up every time it's disassembled it also doesn't meet company standards. This means that there are around 15-30% of cocoa beans that do not meet specifications. This figure does not include cocoa beans that were rejected because they did not meet the standards. Thus, it is very possible that the quality of cocoa beans in Southeast Sulawesi Province is still relatively low so that a better management of cocoa at the farm level (upstream) is needed.

2. Transportation

In the production process (processing of cocoa beans), the company obtains raw materials from several suppliers, not directly from farmers. Based on the results of observations and interviews with the company, it was found that this happened because the company did not yet have partners with farmers. Another reason is that there is no specific program or armda in mobilizing raw materials at the farmer level, so the company only focuses on cooperation with a few suppliers which are recognized as being individual.

Some suppliers use a fleet of trucks with a capacity of around 20 tons. With the existing production capacity (35,000 tons/year), every month the company receives raw materials and/or produces about 2,900 tons of cocoa. To achieve this, according to the data and observations, it was found that there were around 145 trucks or about 4-5 trucks every day carrying out demolition work at the company.

ISSN (Online) 2456 -1304

International Journal of Science, Engineering and Management (IJSEM)

Vol 10, Issue 4, April 2023

3. Product Type and Market Purpose

Processed cocoa beans in PT. Industrial Cocoa Kalla in the form of Cocoa Fat (Coco Belor), Chocolate Paste (Cocolignaer), Cocoa Powder (Cocopowder), and Cocoa Cake (Coco Cal). All of these types are marketed abroad with export destinations being the Netherlands, Germany and Japan. Each type of product on the market uses United States dollars ($) with details as presented in Table 2.

Table 2. Export Selling Prices of Chocolate Types by PT Kalla Kakao Industri

Types of products	US dollar prive (USD $/kg)
Coco Belor	10
Cocolignaer	7
Cocopowder	8
Coco Cal	2

Note Assuming Rupiah Value per 2021 IDR 14,200/US Dollar

Based on these data it is known that the type of chocolate that has the highest selling value is the type of Cocoa Fat (Coco Belor) of around USD $ 10/kg or around Rp. 142,000/kg, with market destinations being the Netherlands, Germany and Japan. The lowest type of chocolate is Bungkil (Coco Cal) around USD $ 2/kg or around IDR 28,400/Kg, with the aim of the Japanese market.

D. Cocoa Industry Development Strategy PT. Kalla Cacao Industry of Southeast Sulawesi

Based on the results of interviews with the company PT. Kalla Cacao Industry and in-depth interviews from various stakeholders related to the development of Cocoa commodities by PT. Kalla Cacao Industry and in Southeast Sulawesi in general, several internal and external factors have been identified, described in Table 3.

Table 3. Internal and External Factors for Cacao Industry Development by PT. Kalla Cacao Industry

Internal Factors	
Strengths [S]	Weaknesses [W]
1. Modern company with international standard, 2. Having sufficient human resources, 3. Production capability up to 35,000/year, 4. Producing export quality chocolate products, 5. Strong market access and guarantees to the world, and 6. Central and regional government policy support (Development of the National Cocoa Processing Industry Cluster).	1. Quality of cocoa beans in Southeast Sulawesi Province (Southeast Sulawesi), most of which do not meet company standards (fermentation), 2. Farmers' cocoa production is still low, and 3. There is no contract or partnership with cocoa farmers/farmer groups in an effort to ensure market certainty for raw materials
External Factors	
Opportunities [O]	Threats [T]
1. The Cocoa Industry has a good market and will continue to grow in the future along with the increasing demand/consumption of Cocoa in the World, 2. World chocolate demand (consumption) experienced a deficit of up to 60,000 in the last 3 years, 3. Standardization of national cocoa products (SNI 2323 2008) for export scale, and 4. The existence of the ASEAN free market (AEC)	1. The existence of the ASEAN free market (AEC), 2. The increase in cocoa production tends to slow down, 3. Demand for Cocoa is getting higher, reaching 2.5 million tonnes/year, 4. Conversion of cocoa plantation land, and 5. There is no contract or partnership with cocoa farmers/farmer groups in an effort to ensure a market for quality raw materials.

Based on the results of the identification of the SWOT factors, a swot analysis was then carried out to formulate the development of the cocoa industry by PT. Kalla Cacao Industry as presented in Table 4.

Table 4. IFAS-EFAS Formulation for Cacao Industry Development by PT. Kalla Cacao Industry

IFAS/ EFAS	S	W
O	Strategy-SO 1. Improve the company's technological capabilities to increase the company's production and productivity in the future (S-1, S-3, S-5, O-1, O-2, O-3, O-4). 2. Improving HR capabilities and skills in ensuring company effectiveness and production quality (S-2, S-4 and O-3). 3. Maintain and improve market access to guarantee	Strategy-WO 1. Improving the quality of cocoa beans according to standards (SNI 2323 2008) on an export scale (W-1, O-3, O-4). 2. Increasing cocoa production through coaching (partnerships) with farmers to meet the increasing needs of the cocoa market (W-2, W-3, O-1, O-2, O-3).

ISSN (Online) 2456 -1304

International Journal of Science, Engineering and Management (IJSEM)

Vol 10, Issue 4, April 2023

	cocoa market (S-5, O-3, O-4). 4. Increasing synergy with both central and regional governments and collaboration with related parties to support policies for the development of the national cocoa industry (stakeholders) for cocoa, especially farmers (S-6, O-2, O-4).	
T	Strategy-ST 1. Improving company competitiveness through increasing company capabilities (technology and human resources) as an effort to increase the quality and quantity of production to meet the increasing needs of the world market (S-1, S-2, S-3, S-4, S-5, T-1, T-2, T-3). 2. Strengthening the production base (plantation) of cocoa through increasing the area of cocoa production in Southeast Sulawesi and fostering farmer groups (partners) (S-6, T-4, T-5).	Strategy-WT 1. Fostering farmers (skills) to increase the quantity and quality of production according to export standards (W-1, W-2, T-1, T-2, T-3). 2. Synergy with all parties, especially the government and cocoa farmers in order to support the Cacao Processing Industry Cluster Development program in Southeast Sulawesi which leads to increasing farmer independence and cocoa production (W-3, T-4, T-5)

Analysis of Cocoa Industry Competitiveness PT. Kalla Cacao Industry

Based on the vision and mission as well as the results of the SWOT analysis, a gap was obtained in the development of the cocoa industry by PT. Kalla Cacao Industry is described as follows:

a. The quality of cocoa beans is still low (some do not meet industry specifications),
b. Cocoa production rate is still low,
c. Market demand is increasing every year both domestically and internationally,
d. Local human resources in the field of product processing are still limited,
e. Conversion of cocoa plantation land, and
f. Farmer-level institutions as bases (cocoa seed producers) and suppliers that have not yet started.

Due to this discrepancy, an analysis was carried out to formulate alternatives for the development of the cocoa industry at PT Kalla Kakao Industri. Alternatives to developing competitiveness are presented in Table 5 below,

Table 5. Analysis of the competitiveness of PT Kalla Cocoa Industry's cocoa industry development

No	Gaps	Alternative (Recommended) Development
1	The quality of cocoa beans is still low (some do not meet industry specifications)	Guidance and training of farmers to improve the quality of cocoa beans
2	Cacao production level is still low	Together with related parties to facilitate farmers to increase the volume of cocoa beans
3	Market demand is increasing every year both domestic and international markets	Increasing the volume and production capacity of the company
4	Limited local human resources for product processing	Partnership cooperation in educational institutions in mastering the science and technology of processing cocoa beans
5	Cocoa plantation land conversion	Together with the government to control land conversion, rejuvenation, and expansion (development) of cocoa plantations in potential areas in Southeast Sulawesi
6	Institutions at the farmer level as a basis (cocoa bean producers) and suppliers that have not yet worked	Establish upstream-downstream cocoa development institutions (farmers-producers)

Cocoa Industry Development Strategy and Program

Cocoa industry development strategy and program PT. Kalla Cacao Industries are as follows:

1. Be competitive: a) Increase production capability through modernization of production technology; b) Standardization of work and product quality; c) Company performance based on effectiveness and efficiency; d) Setting targets and company performance achievements
2. Increasing farmer human resources to ensure market and product quality: a) Fostering farmer groups as an effort to empower local farmers; and b) Education and training of farmers in creating farmer independence and increasing cocoa product and productivity.
3. Upstream-downstream institutions and partnerships; a) Identification of related parties at the production base and sublayer levels; b) Formulation of the upstream-downstream cooperation framework.

4. Synergy with related parties: a) Improve collaboration system in industrial development; b) Formulation of joint government and private policies or universities for institutional development and cocoa partnerships.
5. Rejuvenation of plants and development (area) of plantations as a production base: a) Identification of potential cocoa plantations that are not/not producing; and b) Identification of potential areas for cocoa plantation development in Southeast Sulawesi.

The five strategic points lead to innovation from all aspects up to an emphasis on partnerships, and capacity building of farmers. This emphasis is in line with what Swisscontact [10] has stated to increase its competitiveness in the cocoa value chain. These farm-level interventions help farmers to increase their cocoa bean production with various types of support, such as training on good agricultural and nutritional practices and integration of gender sensitivity, improved farmer organizations and providing better access to markets and finance.

The strategic model produced in this study is also consistent with the views of Oktaviani et al., [24] in research which state that the strategic and priority steps that need to be taken in developing the cocoa (industry) are to build as many product innovations as possible and develop the culinary market in Indonesia; provide subsidies for superior agricultural products so that production costs become efficient; provide counseling and training to small industries so that the industries are able to compete in terms of human resources and technology; build strategic partnerships; establish cooperation with associations outside Indonesia and other research institutions; conduct research to produce superior and high productivity cocoa beans; make the fermentation process mandatory for cocoa farmers; simplification of government policies that have a similar function related to safeguarding domestic products; and replanting of Cocoa trees.

V. CONCLUSIONS

The results of the analysis show that Indonesia's role in meeting world demand for cocoa is very important, with the third largest production and exporter in the world after Ivory Coast and Ghana. However, the problem is that the amount of production and exports have decreased. The development of the national cocoa industry is very promising for business actors because there is an imbalance between the number of world market demands and the amount of production.

In general, the Indonesian cocoa business is produced from smallholder plantations, many of which do not meet export specifications. In conditions like this, the role of industry becomes important to improve the quality of cocoa with innovation so that market share and export value are expected to increase.

Cacao Industry by PT. Kalla Cacao Industry in meeting the demand for the export market in accordance with the standards and/or specifications of SNI 2323/2008/2010 so as to produce export products. In an effort to increase its role, it is necessary to have a strategic step taken by PT. Kalla Cacao Industry is: a) Competitive; b) Increasing the human resources of farmers to ensure market and product quality; c) Upstream-downstream institutions and partnerships; d) Synergy with related parties; and e) Plant rejuvenation and development (area) of plantations as a production base.

VI. SUGGESTION

First, the Government of Indonesia needs to formulate a Cocoa development model, this step is important, especially in controlling uncertain climate change resulting in a decrease in the quantity and quality of Cocoa beans. *Second*, the company PT. Kalla Cocoa Industry to if possible build cooperation and partnerships with related parties, especially farmers, suppliers, and the government in order to strengthen Cocoa processing in Southeast Sulawesi upstream-downstream which leads to improvement and development of companies and empowerment (welfare) of Cocoa farmers based on quality and product quantity and productivity.

Third, it is necessary to carry out studies and further research regarding investment opportunities and improvement of the Cocoa industry (company) in potential areas in Sulawesi as a basis for national Cocoa development.

REFERENCES

[1] Freyabadi "*Indonesia masuk daftar 7 negara penghasil kakao terbesar di dunia",* 2022. https://www.freyabadi.com/id/blog/indonesia-masuk-daftar-7-negara-penghasil-kakao-terbesar-di-dunia)

[2] Larasati, R.J., Anindita, R & Widyawati, W. "Peningkatan ekspor kakao indonesia di pasar internasional", *Jurnal Ekonomi Pertanian dan Agribisnis* (JEPA), vol. 6, no.3, pp. 1025-1037. 2022. https://doi.org/10.21776/ub.jepa.2022.006.03.23

[3] UN Comtrade. (2019). *International trade statistics yearbook 2018 volume II: Trade by product: Vol. II*. Department of Public Information United Nations. https://comtrade.un.org/pb/downloads/2015/ITSY2015VolII.pdf

[4] Witjaksono, J and Asmin. "Cocoa farming system in Indonesia and its sustainability under climate change", *Agriculture, Forestry and Fisheries*, vol. 5, no. 5, pp. 170-180. 2016. doi:10.11648/j.aff.20160505.15

[5] FAOSTAT. "*Crops and livestock products: cocoa*", FAO United Nations. 2022. https://www.fao.org/faostat/en/#data/QCL

[6] Ibnu, M. "Mencapai produksi kakao berkelanjutan di Indonesia", *Jurnal AgribiSains*, vol. 8, no. 2, pp. 22-33. 2022. https://ojs.unida.ac.id/AGB/about/editorialTeam

[7] Wijayati, H., Widhiyoga, G., & Madyar, U.N. "Dampak pandemi bagi global value chain industri kakao Indonesia", *Jurakunman*, vol. 15 no. 1, pp. 109-120. 2022, www.jurakunman.stiesuryanusantara.ac.id

[8] Ministry of Industry of the Republic of Indonesia [Kementerian Perindustrian RI]. 2012. *Buku Petunjuk Teknis: Penilaian, Klasifikasi Dan Pembinaan Produk OVOP*. Jakarta

[9] Augustin, N.P., Prasetyo, E & Santoso, S. "Analisis daya saing dan trend ekspor kakao Indonesia ke lima negara tujuan tahun

2010-2019", *Jurnal Ekonomi Pertanian dan Agribisnis* (JEPA), vol. 6, no. 2, pp. 442-455, 2022. https://doi.org/10.21776/ub.jepa.2022.006.02.10

[10] Schaad, N. and Fromm, I. "Sustainable cocoa production program (SCPP): Analysis of cocoa beans processing and quality in post-harvest in South East Sulawesi in Indonesia", *Asia Pacific Journal of Sustainable Agriculture Food and Energy* (APJSAFE), vol. 6 no. 1, pp. 1-6. 2018. http://journal.bakrie.ac.id/index.php/APJSAFE

[11] Swisscontact. "Access to finance for cocoa farmers in Indonesia", Jakarta: 2016. https://www.swisscontact.org

[12] BPS [Badan Pusat Statistik]. "*Sulawesi tenggara dalam angka"*. Kendari: BPS Sulawesi Tenggara. 2015

[13] Spillane. "*Budidaya Kakao",* Jakarta: Gunung Agung. 1995.

[14] Wahyudi, T., Pangabean, T.R & Pujianto. "*Panduan lengkap kakao, manajemen agribisnis dari hulu hingga hilir"*, Jakarta: Penebar Swadaya. 2008.

[15] Poedjiwidodo, M. S. "*Sambung samping kakao"*, Semarang: Trubus Agriwidya. 1996.

[16] Steiss, A.W. "*Strategic management for public and nonpropit organizations"*. New York: Marcel Dekker, Inc. 2003.

[17] Bryson, John M. "*Perencanaan strategis bagi organisasi sosial"*. Yogyakarta: Pustaka Pelajar. 2002.

[18] Hill, C. W. L., dan Jones, G. R. "*Strategic Management an Integrated Approach"*. Mason, Ohio: South-Western Cengage Learning. 2008.

[19] Hamel & Prahalad. "*Management"*. New Delhi: Tata McGraw Hill. 1995.

[20] Gavrilova, N.G. 2021. Contemporary global production and consumption of cocoa: an assessment. *IOP Conf. Series: Earth and Environmental Science 839, AGRITECH-V*, 2021: 1-6. doi:10.1088/1755-1315/839/2/022095

[21] BPS [Badan Pusat Statistik] Nasional. "*Statistik kakao indonesia 2022*. Jakarta: BPS Sulawesi Tenggara. 2022.

[22] Nurhadi, E., Hidayat, S.I., Indah, P.N., Widayanti, S., & Harya, G.I. "Keberlanjutan komoditas kakao sebagai produk unggulan agroindustri dalam meningkatkan kesejahteraan petani. *Jurnal Sosial Ekonomi dan Kebijakan Pertanian*. vol. 8 no. 1, pp. 51-61. 2019. http://journal.trunojoyo.ac.id/agriekonomika

[23] BPS [Badan Pusat Statistik] Nasional. "*Statistik kakao indonesia 2014*", Jakarta: BPS Sulawesi Tenggara. 2014.

[24] Oktaviani, M.S., Syarief, R., & Najib, M. "The effect of application of indonesia national standard on cocoa industry and strategy to face the asean economic community in 2015. *ASEAN Journal of Economics, Management and Accounting*, vol. 1, no. 2, pp. 32-46. 2014. https://fem.ipb.ac.id