

# STRATEGY MODEL TO INCREASE JEMBER COCOA (THEOBROMA CACAO L.) COMPETITIVENESS

T Hidayat<sup>1</sup>, R S Mahanani<sup>2</sup>

<sup>1</sup>Department of Agribusiness Management Politeknik Negeri Jember, 68101Indonesia

Email : taufik\_hidayat@polije.ac.id

**Abstract:** Cacao (*Theobroma cacao L.*) is the mainstay of plantation commodities which the government prioritises in agricultural development. This research aims to Analyze the cocoa potential in Jember; the competitiveness; formulate the strategy to increase Jember cocoa competitiveness. This study is the survey research which was used for the exploration and descriptive purpose. The research method were descriptive and analytics. The research method used descriptive quantitative analysis, Policy Analysis Matrix (PAM), and SWOT analysis. the result of the study showed that Jember cocoa has competitiveness, both in terms of its comparative and competitive advantages. The condition of Jember cocoa agribusiness is aggressive strategy. Jember cocoa agribusiness is in the most favorable condition. The strategy adopted in this condition is to support an aggressive growth policy (growth oriented strategy). The main priority of Jember's cocoa competitiveness strategy is the SO (Strengths-Opportunities) strategy, which is a strategy that utilizes land availability and suitability, farmer resource support, cohesiveness of established farmer groups and local traditions and culture to meet cocoa demand, both for local markets and exports with support in the form of government commitments, ever-increasing selling prices, and the presence of investors.

*Keywords: Model Formulation, Competitiveness, Jember Cocoa, PAM*

## 1. Introduction

Cocoa (*Theobroma cacao L.*) is one of the main plantation commodities which is prioritized by the government of Indonesia in the future agricultural development, where Indonesia is the third biggest country of cocoa fruit production with the annual production up to 700.0 00tons. Cocoa production in Indonesia is widespread in nearly all provinces, and East Java is one of the main producers of cocoa in Indonesia. The cocoa plantation width in East Java in 2015 was 69.623 ha with cocoa fruit production up to 37.667 tons. The cocoa quality and productivity needs more attention along with the market demand, either the local or export which is gradually increasing. Improving the lower industry requires the adequate cocoa fruit quantity and quality (Zulfiandri and Marimin, 2012). According to Goenadi et al (2005), Indonesian cocoa faces various complex problems, including the low productivity of the plantation due to the pest attack such as the cocoa weevil, fruit deterioration disease, and physical damage caused by the careless handling during the harvest. The low cocoa productivity and quality has decreased the Jember cocoa competitiveness. Beside the problems of productivity and quality, there were some other problems which could decrease Jember cocoa competitiveness, including the low quality and competency of the farmer resource in terms of knowledge, attitude and skills, low ability to market the product, low infrastructure, the lack

of technology transfer and experts and the low trustworthiness from investor. The low quality and competency of the farmers at the end will influence the low productivity and quality of the cocoa fruit. The low productivity and quality of the cocoa fruit will decrease the products competitiveness. In the other hand, the phenomenon of the decreased production, the increased market demand and the lower stock of cocoa, provides an opportunity to increase Jember cocoa competitiveness in fulfilling the demand of domestic and export market.

## **2. THE SCOPE RESEARCH**

This study aims to 1) test and analyze the cocoa potential in Jember; 2) test and analyze the competitiveness (excellence and comparison) of jember's cocoa; 3) formulate the strategy to increase Jember cocoa competitiveness.

## **3. Theoretical and Empirical Review**

Based on the sustainable competitive concept is the maximum performance by creating the superior value for the customer. The idea of this concept was that the customer expected greater product value than the product offered by the other company. The resource utilization owned by the company is used to create the excellent value for the customer.

### *3.1 Concepts and Competitiveness Theories*

The concept of competitiveness rests on the concept of comparative advantage which was Competitiveness is productivity that is defined as output produced by labor. Competitiveness is determined by the competitive advantage of a company and is very dependent on the level of relative resources it has, the importance of competitiveness because of the following three things: (1) encouraging productivity and increasing independent capability; (2) increasing economic capacity, both in the regional context of the economy and in the quantity of economic actors so that economic growth increases; and (3) the belief that market mechanisms create more efficiency

Theoretically, the conception of competitiveness can refer to Hill and Jones (2009: 3), that competitiveness will be achieved when the profitability of a company is greater than the average profit of all companies in the same industry. The higher the company's profitability compared to other companies for the same industry, the higher the competitiveness of the company. *Factors that influence the competitiveness of a commodity are Production, exchange rates, Prices.*

### *3.2 Policy Analysis Matrix (PAM)*

One way to measure and analyze the competitive and comparative advantages of a commodity is to use the Policy Analysis Matrix (PAM). The Policy Analysis Matrix (PAM) is a model used to analyze comparative advantage (economic analysis) and competitive advantage (financial analysis) of a commodity, which was first introduced by Monke and Pearson in 1989. According to Monke and Pearson (1989: 10- 19), the objectives of the PAM analysis are: (1) calculating the level of private profit of a measure of farm competitiveness at the level of market prices or actual prices; (2) calculate the level of farm social profit generated by assessing output and costs at the level of price efficiency (social opportunity cost); and (3) calculate the transfer effect, as the impact of a policy.

The results of the PAM analysis can be used to determine whether a country has high or low competitiveness in a commodity production system in terms of certain technologies and regions, and how a policy can improve competitiveness through creating business efficiency and revenue growth. In addition to being used to measure the competitiveness of a commodity, PAM can also see the extent of the impact of input and output price policies, or a combination of the two by the government on producers.

Assumptions used in PAM include: (1) calculations based on private prices, ie prices that are actually received by producers and consumers or prices that occur after the policy; (2) calculation based on social price or shadow price, that is the price in perfect competition market conditions or the price that occurs if there is no government policy. Shadow prices on tradable commodities are prices that occur in international markets; (3) outputs are tradable and inputs can be classified into tradable components and non-tradable components; and (4) positive and negative externalities are considered mutually exclusive.

### *3.3 Competitiveness Improvement Strategies*

The SWOT Matrix is an important matching tool that helps managers develop four types of strategies: SO (strengths-opportunities) strategies, WO (weaknesses-opportunities) strategies, ST (strengths-threats) strategies, and WT (weaknesses-threats) strategies. Strategic formulation at the company level needs to be reviewed as part of winning the competition. Strategic formulation at the company level is also useful for increasing company competitiveness, both at the local and international level [7]. SWOT analysis still plays an important role in the strategic planning process of several large companies [7]. The use of SWOT analysis is based on logic that can maximize strengths and opportunities, but simultaneously can minimize weaknesses and threats [7]. SWOT is an analytical tool for developing strategies so that companies are able to formulate and determine strategies so that they can improve their competitiveness [7].

Strategy formulation refers to the results of external and internal environmental analysis which are then used as the basis for choosing the right strategy. The results of the company's internal and external environment analysis will provide an overview of the company's position on the space matrix. The success of the strategy will largely depend on the ability and accuracy of the analysis data on the company's internal and external environmental conditions. The results of the SWOT analysis will produce four strategies, namely: SO (strengths-opportunities) strategy, this strategy uses the company's internal strengths to take advantage of external opportunities. WO strategy (weaknesses-opportunities) aims to increase internal weaknesses by utilizing external opportunities. ST (strengths-threats) strategy, using the company's strengths to avoid or reduce the impact of external threats. WT (weaknesses-threats) strategy is a defensive strategy aimed at reducing internal weaknesses and avoiding external threats.

### *3.4 Framework of Thinking*

Based on the above rationale, the conceptual framework serves as a guide for this research. However the framework of thinking is presented to show the process. Fatherly analysis of the competitiveness of cocoa muddy because seeing the low production and productivity of cocoa in Jember, resulting from the analysis of the competitiveness of this can be the formation of a strategic move to increase the development of Cocoa Jember, in the hope of later in 2020 the establishment of an action plan competitiveness enhancement cocoa development Jember. So that from this competitiveness analysis a strategic step can be formed to increase the development of Jember Cocoa, with the hope that the next action plan will be to establish the competitiveness to increase Jember cocoa development and the program and implementation of the Jember Cocoa development activities.

## **4. RESEARCH METHOD**

This study is a combination of exploratory research, descriptive and explanatory. Explorative research conducted to obtain information relating to the competitiveness of cocoa Jember and alternative arrangements, strategic priorities, and action plans for improving the competitiveness of cocoa Jember recommended through theoretical and empirical studies before continuing with descriptive study.

The population in this study are business people who are directly or indirectly involved in Jember cocoa farming activities. The main instruments used in this study are questionnaires addressed to farmers. Furthermore, the data obtained are tested and analyzed using Policy Analysis Matrix (PAM) and SWOT

## 5. RESEARCH RESULTS AND DISCUSSION

Cocoa plantation in Jember was generally cultivated by the public's plantation, plantation company, and government. Cocoa production has a potential to increase along with the cocoa derivation product development growth, either in the form of instant beverages, or other product which has the benefits for freshness, health, beauty, and fitness. This factor becomes important related to the reason why cocoa agribusiness shall be developed by all cocoa stakeholders that in the future it can be the main commodities. So far, in general, the cocoa agribusiness performance development is relatively apprehensive which was marked by the decreased width, production cost increase, the low quality of the public's cocoa and has not yet met the SNI standard, therefore, many improvement efforts shall be conducted in each subsystem in a comprehensive and integrated way.

Cocoa plantation has a positive impact on its surrounding environment, which could support the land and water conservation (nearly 95% tea canopy cover) if it is managed well. With the tight competition, competitive excellence and the added value of the cocoa commodity become the defining factors in winning the competition. In the agribusiness system, the upper subsystem is very susceptible in terms of determining the cocoa cultivation quality. The good quality of seeds, agriculture production facilities, and fertilizer could produce the competitive seeds to cultivate.

The whole potential of Jember cocoa has 205,28 ha of plantation width with productivity level of 0,79 kw/ha and production level of 26,12 kw where the biggest cocoa production area potential spread in 10 regions in Jember.

### 5.1 Analysis of Jember Cocoa Competitiveness

Tabel 1. *Policy Analysis Matrix (PAM) Kakao Jember (Rp/Ha/Th)*

Description	Penerimaan	Biaya		Benefit
		Tradable Input Tradable	Input non Tradable	
Privat Price	23.544.000	7.009.413	14.118.612	2.415.975
Sosial Price	24.429.350	6.721.688	13.656.882	4.050.780
Divergensi	(885.350)	287.725	461.730	(1.634.805)
DRC =	0,771	PCR = 0,854		

showed that the private profitability (revenue) of Jember cocoa is smaller than the social profitability due to the suspicion of monopsony practice (buyer controls the market price). The tradable cocoa input in Jember influenced the small profitability gained by the farmer, which is Rp2.415.975 or around 10% of the total income.

The comparative excellence of Jember cocoa that the Domestic Resource Cost (DRC) coefficient was <1,00 means that along with the contributing factors such as local farmer resource, plantation, and other supporting facilities as well as the infrastructure that could provide 22,9% cost saving than those cultivated abroad. The competitive excellence of Jember cocoa is the lower production cost than those cultivated abroad.

### 5.2. Competitive Excellence of Jember Cocoa

Table 1 showed that Jember cocoa had a competitive excellence. This was showed by the Private Cost Ratio (PCR) coefficient for 0,854 which was smaller than 1,00. The PCR coefficient of 0,854 which was smaller than 1,00 means increasing the output additional value for one unit of US\$1 requires US\$0,854 for the domestic factor cost. The 0,854 PCR coefficient or 85,4% showed that using 85,4% of the cost will provide 14,6% economic profit of the total cost or in the other hand, the home cocoa production cost per kilogram was 14,6% cheaper than those produced abroad.

### 5.3. Agribusiness Strategy of Jember Cocoa

Jember cocoa agribusiness strategy was in Quadrant 1 with the aggressive strategy. In this situation, Jember cocoa was in the best position because it has many opportunities and strengths to improve its product competitiveness. The implemented strategy in this condition is supporting the aggressive

growth policy (growth oriented strategy).

SO strategy is a strategy which uses the strength to utilize the opportunity. The SWOT matrix result obtained SO strategy which utilizes the field availability and compatibility, farmer resource support, cohesiveness of the established farmer group, as well as the local tradition and culture to fulfill the demand on cocoa, either for the local or export market supported by the government commitment, increased selling price, and the availability of investor. This is suitable to the review of Zulfiandri and Marimin (2012).

WO strategy was used to fix the weakness by utilizing the opportunities. The SWOT matrix obtained two WO strategy, they are; Strategy WO1, utilizing the broad market and the increased selling price to produce a good quality product by maximizing the facility and infrastructure, capital and information, lower industry, distribution and commerce, as well as the market research and development. This strategy is suitable to the review of Drajat et al (2007); Hasibuan et al (2012); Rifin (2013); Strategy WO2, increasing the product quality supported by the government commitment and the existence of investor. This is suitable to the review of Rubiyo and Siswanto (2012: pp.33-48); Drajat et al (2007); Supriatna and Drajat (2008: pp. 130-145).

ST strategy is a strategy which uses strength to anticipate the threat. The SWOT matrix result obtained the ST strategy, which utilizes the cohesiveness of the established farmer group to produce the good quality cocoa to fulfill the global standard. This is suitable to the review of Rubiyo and Siswanto (2012).

WT strategy is a strategy which minimizes the existing weakness and anticipating threats. The SWOT matrix obtained WT strategy which establishes integration with the lower industry to produce the good quality derivation product to increase the farmer's income. This is suitable to the review of Yantu et al (2010).

## **6. CONCLUSION**

Jember cocoa has comparative and competitive excellence. It was showed by the DRC coefficient (DRC = 0,771) and PCR (PCR = 0,854) which was smaller than 1 (DRC and PCR <1), Jember cocoa agribusiness was in the most profitable condition because they had many opportunities and strengths which can be used to increase the product competitiveness. Strategies implemented in this condition are supporting the aggressive growth policy (growth-oriented strategy), prioritizing Jember cocoa competitiveness increase; by utilizing the field availability and compatibility, farmer resource support, farmer integration; creating a strategy which utilizing the broad market and increased selling price to produce the good quality product by maximally utilizing the supporting facilities and infrastructure, capital and information, the lower industry existence, distribution and trade system, and market research and development, the ST strategy which utilizing the farmer's group solidarity which has been established to produce good quality cocoa to fulfill the global standard, strategy to improve the cocoa fruit quality with some supports such as government commitment and the investor availability.

## **7. Acknowledgments**

I would like to say thank you especially to the research team which has assisted during the research. In organizing this research, many people have provided motivation, suggestion, and support for the researcher. Thank you very much for the Director of Politeknik Negeri Jember (Polije) for the motivation. This research will never be conducted without their assistance, support, and patience. Another special gratitude is given to Ristekdikti which conducted this research through the PNPB fund in 2019

## References

- [1] Badan Pusat Statistik Jawa Timur, 2018. *Luas Area Perkebunan Kakao berdasarkan Kabupaten di Jawa Timur*. Surabaya: BPS.
- [2] Kuncoro M 2011 *Perencanaan Daerah: Bagaimana Membangun Ekonomi Lokal, Kota, Dan Kawasan Salemba Empat* Jakarta.
- [3] Blakely E J and Bradshaw T K 2002 *Planning Local Economic Development: Theory and Practice Third Edition* United State of America
- [4] Nazir M 2013 *Metode Penelitian* Bogor Ghalia Indonesia
- [5] Margono 2004 *Metodologi Penelitian Pendidikan* Jakarta PT Rineka Cipta pp 126.
- [6] Monke, Eric A dan Scott R Pearson. 1989. *The Policy Analysis Matrix for Agricultural Development*.Cornel University Press.
- [7] Rangkuti F 2011 *Analisis SWOT: Teknik Membedah Kasus Bisnis*. Gramedia Pustaka Utama. Jakarta
- [8] Rubiyo dan Siswanto. 2012. Peningkatan Produksi dan Pengembangan Kakao (*Theobroma cacao L.*) di Indonesia. *Buletin RISTRI*. Vol. 3 (1). Tahun 2012. pp.: 33-48.