ANALYSIS AND PRIORITY OF COMPETITIVE ADVANCEMENT FOR ARABICA COFFEE-JAVA COFFEE BONDOWOSO IN INDONESIA

by Bagus Putu Yudhia Kurniawan

Submission date: 24-Jun-2021 08:34PM (UTC+0700)
Submission ID: 1611566591
File name: 94213_ch_38_-_bagus_2-kopi_19_okt_16__ijaber.pdf (377.38K)
Word count: 5744
Character count: 32411

I J A B E R, Vol. 14, No. 14 (2016): 10265-10280

ANALYSIS AND PRIORITY OF COMPETITIVE ADVANCEMENT FOR ARABICA COFFEE-JAVA COFFEE BONDOWOSO IN INDONESIA

Bagus Putu Yudhia Kurniawan*

Abstract: *Coffee is one plantation commodity and playing an important role in national economy and employment provider. Indonesia has rather complex problem, ranging from upstream (on farm) to downstream (off farm). It also occurs in Bondowoso-Indonesia as one centers of arabica coffee producer in Indonesia. The phenomenon of lower production and productivity of Java Coffee Bondowoso, higher market demand coupled with declining stocks can provides an opportunity to enhance the competitiveness of Java Coffee Bondowoso to meet the domestic and export markets demand. This study purpose is to analyze the competitiveness and formulating a strategic priority to improve the competitiveness of Java Coffee Bondowoso. The analysis technique used is the Policy Analysis Matrix (PAM) to determine the competitiveness of Java Coffee Bondowoso. Alternative strategies from SWOT analysis and the priorities are determined by Analytical Hierarchy Process (AHP). The results showed that Java Coffee Bondowoso, both for export and domestic markets, has comparative and competitive advantages. Comparative and competitive advantages of Java Coffee Bondowoso for domestic market are better than the export market. Java Coffee Bondowoso has most favorable conditions because it has a lot of opportunities and strengths that can be used to improve the competitiveness. The needed strategy in these circumstances is to support the policy of aggressive growth (growth-oriented strategy) with main priority strategy to improve the competitiveness of Java Coffee Bondowoso with market diversification to obtain sales growth by expanding export markets and increasing the coffee consumption to meet domestic market.*

Keywords: *Competitiveness, Policy Analysis Matrix (PAM), SWOT, Analytical Hierarchy Process (AHP), Java Coffee Bondowoso.*

1. INTRODUCTION

Coffee is one plantation commodity with significant contribution to Indonesia economy. It becomes foreign exchange earner, source of farmer's income, producer of industrial raw materials, job creation and regional development. Area of 1.2 million ha can produce of 675,915 tones and provide jobs for 11.77 million people or 33% of total agriculture employment (Ministry of Agriculture, 2014). Coffee contributes US $ 1.17 million as income and foreign exchange.

* Department of Agribusiness Management, Jember State Polytechnic, Indonesia. *Email: baguspyudhia@gmail.com.*

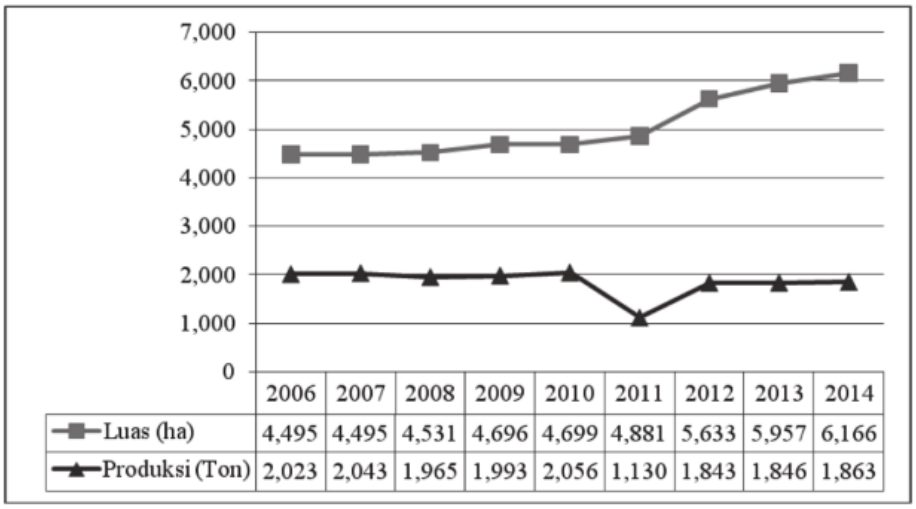
Coffee has a strategic role as export commodity. Indonesia became one of major producers of coffee in the world today. Indonesia becomes third largest of world coffee producer after Brazil and Vietnam (ico.org, 2013). Indonesia's coffee export value in 2013 amounted was 9.67%, still lower than Brazil, which reached 28.10% of total exports coffee (ico.org, 2013).

Indonesia coffee problems are quite complex, ranging from upstream (on farm) to downstream (off farm). On upstream side, coffee productivity level is still lower than other coffee producer other world, such as Brazil (1,000 kg/ha/year), Columbia (1,220 kg/ha/year), and Vietnam (1,540 kg/ha/year). Coffee production in Indonesia reached 700 kg/ha/year for robusta coffee (*Coffea canephora*) and 800 kg/ha/year for Arabica coffee (Narulita et al., 2014). The low productivity of Indonesian coffee is because 95% of people's plantations are generally not use superior seedlings, cultivation techniques are still modest and slow to rejuvenate the plant (Narulita et al., 2014; Novita et al., 2012; Drajat et al. 2007). At downstream (off farm), small scale has limited production facilities and infrastructure (machine processing and packaging), are less innovative in creating product diversification where current type of processed coffee is very diverse in community (Narulita et al., 2014).

Bondowoso is the only district in East Java Province without a coastline. Western region is mountainous (part of Iyang mountains), center area is high plains and eastern area is mountains (part of Ijen plateau).

Bondowoso is one of Indonesian Arabica coffee production centers. It is known as the Java Coffee Bondowoso. Based on the geographical conditions, Bondowoso can produce arabica coffee due to altitude (more than 900 above sea level); it is suitable for arabica coffee (Hariyati and Rahayu, 2014). Bondowoso has an area for people's coffee of 5.957 ha 2013 with the production reaches 1,846 tons. The area increases to 6166 ha 2014 with coffee production reached 1,863 tons. The area and production of Java Coffee Bondowoso are shown in Figure 1 below.

Figure 1 shows a comparison between area and coffee production in Bondowoso-Indonesia. Cultivation area for Java Coffee Bondowoso increase every each year, but it does not offset the increase in production and productivity. Java Coffee Bondowoso Production from the year 2006-2014 has decreased. Productivity of Java Coffee Bondowoso in year 2006-2014 reached an average of 374 kg/ha/year. This productivity is much lower when compared to coffee production, both nationally and internationally, where the coffee production in Brazil reached 1,000 kg/ha/year, Columbia 1,220 kg/ha/year, Vietnam 1,540 kg/ha/year, and arabica coffee productivity in Indonesia reach 800 kg/ha/year (Narulita et al., 2014).



	2006	2007	2008	2009	2010	2011	2012	2013	2014
Luas (ha)	4,495	4,495	4,531	4,696	4,699	4,881	5,633	5,957	6,166
Produksi (Ton)	2,023	2,043	1,965	1,993	2,056	1,130	1,843	1,846	1,863

Figure 1: Area and Production of Java Coffee Bondowoso

The issue of quantity, quality, and productivity of Java Coffee Bondowoso need attention. It is consistent with higher market demand, both domestic and exports. The phenomenon of lower production and productivity of Java Coffee Bondowoso makes the selling price always increase, increase in market demand - coupled with lower stock of Java Coffee Bondowoso. It provides an opportunity to enhance the competitiveness of Java Coffee Bondowoso to meet the demand for domestic and export markets.

2. RESEARCH SCOPE

This study analyzes the competitiveness Java Coffee Bondowoso from Indonesia and formulates an appropriate strategy to increase competitiveness to recommend to government. This study is limited to formulation of strategic priorities.

3. LITERATURE REVIEW

Concept and Theory of Competitiveness

The concept of competitiveness is based on concept of comparative advantage introduced by Ricardo around the 18th century (1823), hereinafter known as Ricardian Ricardo models or the Law of Comparative Advantage. Ricardo's theory of comparative advantage is then refined by Haberler (1936) who argued that concept of comparative advantage is based on Cost Balance theory (Opportunity Cost Theory). The theory of comparative advantage becomes more modern as proposed by Heckscher Ohlin in Lindert and Kindleberger (1993). It emphasizes the innate differences of production factor between countries becomes the most important determination in trading (Sudiyarto, 2006).

The concept of comparative advantage is a measure of competitiveness (excellence) potential in terms of competitiveness that will be achieved if the economy is not distorted (Simatupang, 1991; Sudaryanto and Simatupang, 1993). Commodities with comparative advantage also have economic efficiency.

Competitiveness is productivity is defined as output produced by labor. Competitiveness is determined by a company's competitive advantage and very dependent on the relative level of resources. Porter (2001: 12-14), explains the importance of competitiveness for following three points: (1) boost productivity and improve the ability; (2) increase the capacity of economy, both in context of regional economy as well as the quantity of economic actors so that economic growth becomes higher; and (3) the belief that market mechanism creates efficiencies.

Theoretically, a conception of competitiveness could refer to opinion of Hill and Jones (2009: 3), that competitiveness will be achieved when the profitability of company is greater than the average profit of all companies in same industry. The higher the average profitability compared with other companies for same industry makes company will has higher competitiveness.

The study results of Ambastha and Momaya (2004) concluded that hyper-competitive era in last few Decades has created the need for an explicit management of competitiveness. Consequently, Considerable research has been undertaken on competitiveness issues at different level. Competitiveness becomes important to be studied at various levels with developing a comprehensive model and is able to measure the competitiveness (Cetindamar and Kilitcioglu, 2013). Many studies were conducted to determine the level of competitiveness in countries, industries and companies, but there are few studies that focus on enterprise level with a strategy to build a globally competitive (Oral, 1993; Offstein et al., 2007).

One way to measure and analyzing the competitive and comparative advantage of a commodity is Policy Analysis Matrix (PAM). Several studies use PAM to measure and analyze the competitiveness of agribusiness products as undertaken by Haryono et al., (2011), Neptune (2006), Gerungan et al., (2013), Ratna et al., (2013), Emelda and Mappigau (2014).

Policy Analysis Matrix (PAM) is a model used to analyze the comparative advantage (economic analysis) and competitive advantage (financial analysis) of a commodity. It was first introduced by Monke and Pearson in 1989. According Monke and Pearson (1989: 10- 19), purpose of PAM analysis are follow. First is to calculate the level of private profitability a measure of farming competitiveness at level of market price or actual price. Second is to calculate the level of social benefits by assessing farm output and cost efficiency prices (social opportunity cost). Third is to calculate the transfer effect, as the impact of a policy.

PAM results can be used to determine country's competitiveness level in a system of commodity production technology and views of certain regions, as well as how a policy can improve the competitiveness through the creation of business efficiency and revenue growth. In addition, PAM can also shows the impact of policy input and output prices or the combination is done by government to manufacturers.

Policy Analysis Matrix (PAM) can identify profit analysis (private and social), competitiveness analysis (comparative advantage and competitive advantage), and analyzes the impact of policies (Monke and Pearson, 1989: 10-19). Assumptions used by PAM, among others: (1) The calculation is based on private cost, that is the price actually received by producers and consumers or prices that occurred after the policy; (2) The calculation is based on social cost or a shadow price (shadow price), i.e., the price of perfect competitive market conditions or prices that occurred in absence of government policy. The shadow price on tradable commodity is the price from the international market; (3) tradable output and input can be classified into components of tradable and non-tradable component; and (4) positive and negative externalities are considered to cancel each other out.

Competitiveness Improvement Strategy

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. Preparation of strategy at enterprise level needs to be reviewed as part of competition. Preparation of strategy at enterprise level is also useful to improve the competitiveness of enterprises, both at domestic and international level (Oral, 1993; Offstein et al., 2007). SWOT analysis still plays an important role in strategic planning process for several large companies (Afuah, 2009: 324). Utilization SWOT analysis is based on logic o maximize the strengths and opportunities, but at same time to minimize the weaknesses and threats (Rante, 2013). SWOT analysis is a tool to develop a strategy for company to prepare and determine the strategy to improve its competitiveness (Nayantakaningtyas et al., 2012; Anggrianto et al., 2013).

Strategy preparation refers to analysis results of external and internal environment which as the basis to choose right strategy (Hill and Jones, 2009: 7). The analysis results of internal and external environment will provide an overview of company's position in space matrix. The success of strategy will depend on ability and accuracy of data analysis of internal and external environment of company. SWOT analysis will produce four strategies, namely: SO Strategy (strengths-

opportunities), this strategy uses the company's internal strengths to take advantage of external opportunities. WO Strategy (weaknesses-opportunities) aims to improve the internal weaknesses to exploit external opportunities. ST Strategy (strengths-threats), using the strength of company to avoid or reduce the impact of external threats. WT Strategy (weaknesses-threats) is a defensive strategy to reduce internal weaknesses and avoid external threats. Priority selection strategies are based on results of analysis of Analytical Hierarchy Process (AHP) to determine the best strategy to improve the competitiveness of Java Coffee Bondowoso.

4. RESEARCH METHODS

The research location is determined intentionally in Bondowoso with consideration as centers of arabica coffee producer in Indonesia. Phenomenon of increase in land area for cultivation of coffee is not matched by the lower production of Java Coffee Bondowoso year 2006-2014. Productivity of Java Coffee Bondowoso also still very low, much lower than the national coffee production.

This study is a combination of exploratory, descriptive and explanatory research. Explorative research is conducted to obtain in-depth information related to Java Coffee Bondowoso competitiveness, both for domestic and export markets, and prioritizing strategies recommended to increase competitiveness through theoretical and empirical studies before continuing with a descriptive study.

Primary data were collected by direct interviews and in-depth source of information or informants experts in their field and observe the existing documents. The questions asked had been developed previously by systematic and guided by valid and reliable questionnaire. The secondary data source is from related agencies, books, journals and various publications as listed in Bibliography.

Experimental data is analyzed by PAM to determine the competitiveness of Java Coffee Bondowoso (Monke and Pearson, 1989: 10-19). Furthermore, in formulation of alternative strategy to increase the products competitiveness is done by SWOT analysis, and continued Analytical Hierarchy Process (AHP) to determine the priority strategy to increase competitiveness of Java Coffee Bondowoso.

5. RESEARCH RESULTS AND DISCUSSION

Competitiveness Analysis of Java Coffee Bondowoso

Competitiveness of Java Coffee Bondowoso, both for domestic and international markets (exports) can be seen from the two indicators, namely comparative advantage and competitive advantage of commodity. PAM results of Java Coffee

Bondowoso for export and domestic markets in a sequence are shown in Table 1 and Table 2 below.

Table 1
Policy Analysis Matrix (PAM) of Java Coffee Bondowoso for Export Market (Rp/Ha)

Description	*Income*	*Cost*		*Profit*
		Input Tradable	*Domestic Factor*	
Private price	40.734.341	920.896	22.403.785	17.409.660
Social price	42.875.557	838.278	19.302.774	22.734.505
Divergence	(2.141.216)	82.618	3.101.011	(5.324.845)
DRC = 0,459		PCR = 0,563		

Table 2
Policy Analysis Matrix (PAM) of Java Coffee Bondowoso for Domestic Market (Rp/Ha)

Description	*Income*	*Cost*		*Profit*
		Tradable Input	*Domestic Factor*	
Harga Privat	5.734.341	620.896	2.403.785	2.709.660
Harga Sosial	6.865.557	548.267	1.312.776	5.004.514
Divergensi	(1.121.216)	72.629	1.091.009	(2.284.854)
DRC = 0,208		PCR = 0,469		

Tables 1 and 2 show that tradable inputs of Java Coffee Bondowoso for export markets reach IDR 920.896, - per ha, higher than the domestic market of IDR 620.896 per ha. Tradable inputs for export markets is covered by high income of IDR 40,734,341 per ha, while the output for domestic market only IDR 5,734,341 per ha. Differences of tradable inputs make an impact on income level. Capital invested to domestic market is smaller than the export market. It makes the level of income is also different between the domestic and export markets.

Comparative Advantage Java Coffee Bondowoso

Table 1 and Table 2 show that Java Coffee Bondowoso has a comparative advantage, both for export and domestic markets. This is demonstrated by coefficient of Domestic Resource Cost (DRC) of exports = 0.459 and domestic = 0.208 less than 1.00. The coefficient of exports DRC of 0.459 means that in order to produce the added value of output unit, it can use domestic resources of 0.459, or when synchronized with official exchange rate SER = IDR 11720.03, then the resources domestic usage is IDR 5381.63. The coefficient of exports DRC is 0.459 or 45.9% will provide economic benefits of 54.1% from total cost. DRC Domestic coefficient of 0.208 means that in

order to produce the added value of output unit can use domestic resources of 0.208, or when synchronized with official exchange rate SER = IDR 11720.03, then the use of domestic resources is IDR 2435.50. DRC Domestic coefficient of 0.208 or 20.8% will provide economic benefits of 79.2% from total cost. These results indicate that Java Coffee Bondowoso, both for export and domestic markets, have a comparative advantage or value added larger than domestic resources used.

Java Coffee Bondowoso has DRC coefficient for export market of 0.459 greater than the domestic market of 0.208. This indicates that Java Coffee Bondowoso for domestic market has better a comparative advantage level than the export market.

Competitive Advantage Java Coffee Bondowoso

Table 1 and Table 2 show that Java Coffee Bondowoso has competitive advantages, both for export and domestic markets. This is shown by coefficient of Private Cost Ratio (PCR) of export = 0.563 and domestic = 0.469 less than 1.00. PCR exports coefficient of 0.563 means that in order to increase the value-added output by one unit, additional USD 1 need domestic factor costs of USD 0.563 or IDR 6595.08. PCR export coefficient of 0.563 or 56.3% means the cost of 56.3% would provide economic benefits of 43.7% from total cost. In other words, Java Coffee Bondowoso financially is efficient for export markets.

PCR domestic coefficient of 0.469 means that in order to increase the value-added output by one unit USD 1, it need domestic factor costs of USD 0.469 or IDR 5498.73. PCR domestic coefficient of 0.469 or 46.9% demonstrates the usage 46.9% will provide economic benefits of 53.1% from total cost. In other words, the Java Coffee Bondowoso financially is efficient for domestic market.

Java Coffee Bondowoso has same competitive advantage, both for export and domestic market. PCR export coefficient of 0.563 is larger than the domestic PCR coefficient of 0.469. This indicates that Java Coffee Bondowoso has better competitive advantage for domestic market than export market.

Alternative Formulation Strategies with SWOT Analysis

SWOT analysis is one analysis tool to develop a strategy in order a company can prepare and determine the strategy to improve their competitiveness. Utilization of SWOT analysis is based on logic to maximize the strengths and opportunities, but at same time to minimize the weaknesses and threats. Research results have identified each of factors strengths, weaknesses, opportunities, and threats of Java Coffee Bondowoso. Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) of Java Coffee Bondowoso are shown in Table 3.

Table 3
Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) of Java Coffee Bondowoso

Internal and External Factors	*Factor Identification*	*Weight (a)*	*Ranking (b)*	*Score (a × b)*
A. Strength/Weakness				
1. Land availability	Strength	0,20	2	0,40
2. Land suitability	Strength	0,15	2	0,30
3. Human resources	Strength	0,10	2	0,20
4. Products quality	Strength	0,10	2	0,20
5. Cohesiveness of farmer groups	Strength	0,08	2	0,16
6. Domestic tradition and culture	Strength	0,02	1	0,02
7. Supporting facilities and infrastructure	Weakness	0,05	2	0,10
8. The existence of downstream industry	Weakness	0,15	3	0,45
9. Distribution and trading system	Weakness	0,05	1	0,05
10. Market Research and development	Weakness	0,10	2	0,20
Total (A)		*1,00*		*2,08*
B. Opportunity/Threat				
1. Market	Opportunity	0.25	3	0,75
2. Selling price	Opportunity	0.15	2	0,30
3. Government policy	Opportunity	0.15	2	0,30
4. Facilities of financial institutions	Opportunity	0.10	1	0,10
5. Investor	Opportunity	0.05	1	0,05
6. Availability of production facilities	Threat	0.05	1	0,05
7. Products from other regions	Threat	0.10	2	0,20
8. Climate uncertainty	Threat	0.15	2	0,30
Total (B)		*1,00*		*2,05*

Table 3 shows that internal factors of Java Coffee Bondowoso with highest rank (rank 2) and highest weight (weight 0.20) is the availability of land. These results indicate that availability of land is internal factors that become the main power or most important in Java Coffee Bondowoso agribusiness. This is consistent with arabica coffee need, where land in Bondowoso is suitable to become one of centers of arabica coffee producer Indonesia (Hariyati and Rahayu, 2014). Internal factors as the weaknesses of Java Coffee Bondowoso with highest rank (rank 3) and highest weight (weight 0.15) is the presence of downstream industries. These results indicate that presence of downstream industries is internal factors as a major weakness and should become top priority to be addressed in Java Coffee Bondowoso agribusiness. The existence of downstream industry is strategic and plays an important role to increase the productivity of Java Coffee Bondowoso (Mayrowani, 2013).

Table 3 also shows that external factor opportunities of Bondowoso-Java Coffee with highest rank (rank 3) and highest weight (weight 0.25) is the market. These result indicate that market is an external factor that which becomes the biggest opportunities in Java Coffee Bondowoso agribusiness. This is in consistent with government policy, which in recent years has put the international market (exports) as a priority in implementation of marketing strategies of Java Coffee Bondowoso. External factors threat of Java Coffee Bondowoso with highest rank (rank 2) and highest weight (weight 0.15) is a climate uncertainty. These results indicate that climate uncertainty is biggest external factors threat and a top priority to be anticipated in Java Coffee Bondowoso agribusiness.

Assessment of internal and external environment factors shows that Java Coffee Bondowoso agribusiness in most favorable conditions because it has a lot of opportunities and strengths that can be used to improve their competitiveness. The strategy needs to be done in these circumstances is to support aggressive growth policy (growth-oriented strategy). Furthermore, alternative strategies that can be recommended are shown in SWOT matrix at Figure 2 below.

IFE / EFE	**STRENGTHS (S)** 1. Land availability (S1) 2. Land suitability (S2) 3. Human resources (S3) 4. Products quality (S4) 5. Cohesiveness of farmer groups (S5)	**WEAKNESSES (W)** 1. Domestic tradition and culture (W1) 2. Supporting facilities and infrastructure (W2) 3. The existence of downstream industry (W3) 4. Distribution and trading system (W4) 5. Market Research and development (W5)
OPPORTUNITIES (O) 1. Market (O1) 2. Selling price (O2) 3. Government policy (O3) 4. Facilities of financial institutions (O4) 5. Investor (O5)	**STRATEGY SO:** 1. Market diversification (S1, S2, S3, S5, O1, O3, O4) 2. Product diversification (S2, S3, S4, S6, O1, O3, O4, O5)	**STRATEGY WO:** 1. Enhancing the Research and Development (W1, W2, W4, O1, O2, O3, O4) 2. Enhancing the foreign cooperation (W3, W4, O1, O2, O3, O4, O5)
THREATS (T) 1. Availability of production facilities (T1) 2. Products from other regions (T2) 3. Climate uncertainty (T3)	**STRATEGY ST:** Improving farmer skill (S2, S3, S4, S5, T1, T2, T3)	**STRATEGY WT:** 1. Implementation of Research and Development result (W1, W2, W4, T1, T2) 2. Improving transportation facility (W1, W2, W3, W4, T3)

Figure 2. SWOT Matrix of Java Coffee Bondowoso

SO Strategy

SO strategy uses strength to take advantage of opportunities. SWOT analysis results show two SO strategy below.

1. *SO1 Strategy*: Market Diversification. SO1 strategies is used to obtain Java Coffee Bondowoso sales growth by expanding export markets and increase the coffee consumption to satisfy the domestic market.
2. *SO2 Strategy*: Product Diversification. Product diversification is a strategy to add the product types. Strategy SO2 can be done with processed products diversification of Arabica coffee, such as roasted coffee, instant coffee, coffee mix, decaffeinated coffee, soluble coffee, coffee beer and ice coffee. This strategy can be implemented to makes Java Coffee Bondowoso become a commodity that has high competitiveness in international and domestic markets (Narulita, et al., 2014; Mayrowani, 2013).

WO Strategy

WO strategy is done to improve the weakness by utilizing the existing opportunities. SWOT analysis results show two WO strategy below.

1. *WO1 Strategy*: Enhancing the Research and Development division. This strategy is implemented to solve the existing problems in facilities and supporting infrastructure, downstream industries, distribution and administration, as well as the market research and development. The development of post-harvest technology is important to become a priority because of nature and character of agribusiness products are perishable (Mayrowani, 2013). Postharvest Technology of Java Coffee Bondowoso still done traditionally with simple facilities that have not been able to increase its productivity.
2. *WO2 Strategy*: Increasing the foreign cooperation. Government makes policies to support Java Coffee Bondowoso to become products for their export markets (increasing demand), stable selling price, financial institutions facility and more investors continuously. The medium term expectation is the improvement of business administration scheme which is still less profitable for domestic entrepreneurs.

ST Strategy

ST strategy uses the strength to anticipate or mitigate the threats. SWOT results show SO strategy should increase the farmer's skill. Higher skill of Java Coffee Bondowoso farmers needs more attention. It is consistent with research results of Soetriono (2009), Narulita, et al., (2014); and Novita et al., (2012) that awareness and understanding of farmers are still low. This condition is also occurred in Java Coffee Bondowoso farmers. Low awareness and understanding of farmers will affect the selection of seeds and improvement of harvest quality.

WT Strategy

WT strategy minimizes the weaknesses and anticipates the threats. SWOT analysis results show two WO strategy below.

1. *WT1 Strategy*: Using the findings of Research and Development. Facilities and supporting infrastructure are inadequate and less optimal in presence of downstream industry, distribution and business administration, and research and market development are expected to be resolved with results of research and development that can be applied on a small scale at farm level (Narulita, et al., 2014).
2. *WT2 Strategies*: Improving transportation facility. Transportation generally becomes a problem for traditional farmers. This triggers many farmers to sell Java Coffee Bondowoso at domestic market. Transportation facility improvement became a necessity to minimize the production costs of farmers.

Prioritizing Strategies Using Analytical Hierarchy Process (AHP)

The proposed alternative strategies are analyzed by Analytical Hierarchy Process (AHP). AHP resolve problems in an organized framework, it can be expressed for effective decisions on the issue. The working principle of AHP is a simplification of a complex problem that unstructured, strategic and dynamic into a parts and arranged in a hierarchy. Hierarchical structure strategy elements to increase competitiveness of Java Coffee Bondowoso shown in Figure 2 below.

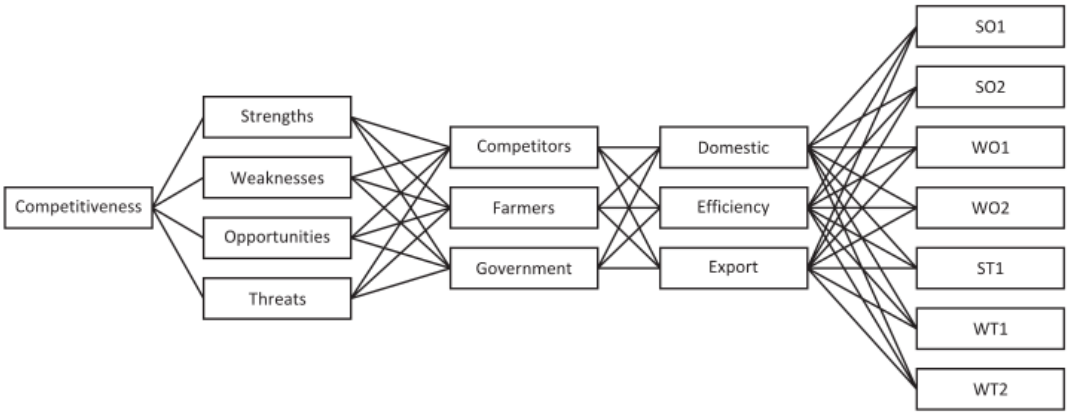


Figure 2: Structure Elements of Strategy Hierarchy to Increase Competitiveness of Java Coffee Bondowoso

The importance level of each variable is shown by numerical value, subjectively about the importance of these variables and relatively compared to other variables - from the various considerations and then synthesized to define a variable with high priority and serves to affect the outcome of system. AHP analysis results produce

strategic priority to improve the competitiveness of Java Coffee Bondowoso, as shown in Figure 3 below.

Figure 3: Alternative Priority Strategy to improve Competitiveness of Java Coffee Bondowoso

Figure 3 shows the priority strategy to increase competitiveness of Java Coffee Bondowoso. The first strategic priority at 0.263 weighs is SO1 strategy, namely the markets diversification. The second strategic priority 0.179 weight is WO1 strategy, namely the enhancing the Research and Development division. The third strategic priority at 0.168 weight is SO2 strategy, products diversification. The fourth strategic priority with at 0.126 weight is WO2 strategy, namely to increase foreign cooperation. The fifth strategic priority at 0.098 weights is ST1 strategy, increasing the farmer's skill. The sixth strategic priorities at 0.087 weight is WT2 strategy, utilization of research and development, and seventh strategic priority at 0.080 weight is WT1 strategy, namely transportation improvements.

6. CONCLUSIONS AND SUGGESTIONS

Conclusion

Java Coffee Bondowoso has a comparative advantage, both for export and domestic market. This is demonstrated by export DRC coefficient (0.459) and domestic DRC (0.208) are smaller than 1.00. Java Coffee Bondowoso also has a competitive advantage, both for export and domestic market. This is demonstrated by export PCR coefficient (0.563) and domestic PCR (0.469) are smaller than 1.00. The DRC and PCR coefficient of Java Coffee Bondowoso for domestic market is smaller than the export market. This shows that comparative and competitive advantages of Java Coffee Bondowoso for domestic market are better than the export market. Java Coffee Bondowoso is in most favorable conditions because it has a lot of opportunities and strengths that can be used to improve their competitiveness. The strategy needs to be done in these circumstances is to support the growth-oriented strategy with main priority strategies to improve the competitiveness of Java Coffee Bondowoso through market diversification to improve sales growth by expanding export markets and increase the consumption of coffee to meet domestic market.

Suggestion

Future researches should enlarge the research scope and greater detail by adding or multiplying the variable factors. Further research should explore deeply each alternative strategy and strategic priorities that have been recommended to provide the best strategies in improving the competitiveness of Java Coffee Bondowoso.

References

[aeki-aice.org] Asosiasi Eksportir Kopi Indonesia. 2013. http://www.aeki-aice.org. (16 November 2014).

[ICO.org] International Coffee Organization. 2013. Coffee Market Report. http://www.ico.org. (12 November 2013).

Afuah, Allan. 2009. *Strategic Innovation: New game strategies for competitiveadvantage*. New York (NY): Routledge.

Ambastha, Ajitabh and Momaya. 2004. Competitiveness of Firms: Review of Theory, Frameworks, and Models. *Singapore Management Review*, Vol. 26 No. 1. pp: 45-61.

Anggrianto, Indri Parwati, dan Sidharta. 2013. Penerapan Metode SWOT dan BCG Guna Menentukan Strategi Penjualan. *Jurnal REKAVASI.* Vol.1 No.1. pp: 52-61 ISSN: 2338-7750.

Asmarantaka RW. 2011. *Analisis Daya Saing Ekspor Kopi Indonesia*. di dalam Baga LM, Fariyanti A, Jahroh S. Kewirausahaan dan Daya Saing Agribisnis. Bogor: IPB Press., pp: 79-93.

Barlaman, M. Balya F., Sony Suwasono, dan Djumarti. 2013. Karakteristik Fisik dan Organoleptik Biji Kopi Arabika Hasil Pengolahan Semi Basah dengan Variasi Jenis Wadah dan Lama Fermentasi (Studi Kasus di Desa Pedati dan Sukosawah Kabupaten Bondowoso). *AGROINTEK*. Vol. 7. No.2. pp: 108-121.

Cetindamar, Dilek and Hakan Kilitcioglu. 2013. Measuring the Competitiveness of a Firm for an Award System. *Competitiveness Review: An International Business Journal.* Vol. 23 No. 1., 2013. pp. 7-22 © Emerald Group Publishing Limited.

Dradjat, Bambang., Adang Agustian dan Ade Supriatna. 2007. Ekspor dan Daya Saing Kopi Biji Indonesia di Pasar Internasional: Implikasi Strategis Bagi Pengembangan Kopi Biji Organik. *Pelita Perkebunan*. Vol. 23 No. 2. pp: 159-179.

Emelda, Andi, Laode Asrul and Palmarudi Mappigau. 2014. An Analysis of Competitiveness and Government Policies Impact on Development of Cocoa Farming in Indonesia. *Asian Journal of Agriculture and Rural Development,* 4(1). pp: 30-35.

Gerungan, Caroline B.D Pakasi, Joachim N.K Dumais, Lorraine W.Th. Sondak. 2013. Analisis Keunggulan Komparatif dan Kompetitif Komoditi Biji Pala di Minahasa Utara. *ejournal. unsrat.ac.id*. pp: 1-15.

Hariyati, Yuli dan Lestari Puji Rahayu. 2014. Agroindustri Kopi Arabika: Analisis Koefisien Tambah, Saluran Pemasaran dan Sistem Manajemen Rantai Pasok. *SEPA:* Vol. 10. No.2., Februari 2014. pp: 157-168 ISSN: 1829-9946.

Haryono, Dede., Soetriono, Rudi Hartadi, dan Joni Murti Mulyo Aji. 2011. Analisis Daya Saing dan Dampak Kebijakan Pemerintah terhadap Produksi Kakao di Jawa Timur. *J-SEP* Vol. 5. No.2 Juli 2011. pp: 72-82.

Hill, Charles W. L. and Gareth R. Jones. 2009. *Essentials of Strategic Management.* Second Edition. Canada: South-Western, Cengage Learning.

Kementerian Pertanian. 2014. *Statistik Pertanian 2014.* Pusat Data dan Sistem Informasi Pertanian. Kementerian Pertanian, Jakarta.

Kustiari, R. 2007. Perkembangan Pasar Kopi Dunia dan Implikasinya bagi Indonesia. *Forum Agro Ekonomi,* 25. pp: 43-55.

Mayrowani, Henny. 2013. Kebijakan Penyediaan Teknologi Pascapanen Kopi dan Masalah Pengembangannya. *FORUM PENELITIAN AGRO EKONOMI*, Vol. 31 No. 1. Juli 2013. pp: 31-49.

Monke, Eric A dan Scott R Pearson. 1989. *The Policy Analysis Matrix for Agricultural Development.* Cornel University Press.

Nalurita, Sari., Ratna Winandi Asmarantaka, dan Siti Jahroh. 2014. Analisis Daya Saing dan Strategi Pengembangan Agribisnis Kopi Indonesia. *Jurnal Agribisnis Indonesia.* Vol. 2. No. 1. Juni 2014. pp: 63-74.

Nayantakaningtyas, Jauhar Samudera dan Heny K. Daryanto. 2012. Daya Saing dan Strategi Pengembangan Minyak Sawit di Indonesia. *Jurnal Manajemen & Agribisnis*, Vol. 9 No. 3. pp: 194-201.

Neptune, Lueandra and Jacque, Andrew. 2006. Competitiveness of Cocoa Production Systems in Trinidad and Tobago. *CAES 26th West Indies Agricultural Economic Conference, Puerto Rico.* July 2006. pp. 50-58.

Novita, Elida., Suryaningrat, Idah Andriyani, dan Sukrisno Widyotomo. 2012. Analisis Keberlanjutan Kawasan Usaha Perkebunan Kopi (KUPK) Rakyat di Desa Sidomulyo Kabupaten Jember. *AGRITECH.* Vol. 32 No. 2 Mei 2012. pp: 126-135.

Offstein, E., Harrell-Cook, G. and Tootoonchi, A. 2007. Executive Discretion as a Driver of Firm Competitiveness. *Advances in Competitiveness Research.* Vol. 15 No 1/2. pp. 1-14.

Oral, M. 1993. A Methodology for Competitiveness Analysis and Sstrategy Formulation in Glass Industry. *European Journal of Operational Research*, Vol. 66 No. 14. pp. 9-22.

Porter, ME. 2001. *Competitive Advantage.* Edisi Bahasa Indonesia. (Jakarta: PT Indeks Kelompok Gramedia, 2001), Edisi 4. pp: 12-14.

Rante, Yohanis. 2013. Strategi Pengembangan Tanaman Kedelai untuk Pemberdayaan Ekonomi Rakyat di Kabupaten Keerom Provinsi Papua. *Jurnal Manajemen dan Kewirausahaan*.Vol. 15 No. 1. pp: 75-88.

Ratna, Purwati., Ribut Santosa, dan Didik Wahyudi. 2013. Daya Saing Kedelai di Kecamatan Ganding Kabupaten Sumenep. *Jurnal CEMARA* Vol. 10. No. 1. pp: 18-35.

Simatupang, P. 1991. The Conception of Domestic Resource Cost and Net Economic Benefit for Comparative Advantage Analysis, Agribusiness Division. *Working Paper* No. 2/91, Centre for Agro-Socioeconomic Research. Bogor.

Soetriono. 2009. Strategi Peningkatan Daya Saing Agribisnis Kopi Robusta dengan Model Daya Saing *Tree Five*., pp: 1-21. *Makalah Seminar Nasional*. Pusat Analisis Sosial Ekonomi dan Kebijakan Pertanian Badan Penelitian dan Pengembangan Pertanian Departemen Pertanian, Jakarta.

Sudaryanto, T dan P. Simatupang. 1993. *Arah Pengembangan Agribisnis: Catatan Kerangka Analisis dalam Prosiding Perspektif Pengembangan Agribisnis di Indonesia*. Pusat Penelitian Sosial Ekonomi Pertanian. Bogor.

Sudiyarto. 2006. Daya Saing Produk Agribisnis Berprespektif Pasar Global dengan Orientasi Perilaku Konsumen. *Makalah Seminar Nasional: Agribisnis Dalam Perspektif Ketahanan Nasional Guna Memenangkan Persaingan Global.* 5 Juli 2006. Pascasarjana UPN VETERAN Jawa Timur, Surabaya. pp: 1-10

ANALYSIS AND PRIORITY OF COMPETITIVE ADVANCEMENT FOR ARABICA COFFEE-JAVA COFFEE BONDOWOSO IN INDONESIA

ORIGINALITY REPORT

14%	13%	2%	0%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	publikasi.polije.ac.id Internet Source	11%
2	www.ojs.excelingtech.co.uk Internet Source	2%
3	U Suryadi, Muksin, Estin Roso Pristiwaningsih. "Analysis Positioning Map and Competitiveness of Kampung Unggul Balitnak Chicken based Farmer's Perception in Jember Regency", IOP Conference Series: Earth and Environmental Science, 2020 Publication	2%

Exclude quotes	On	Exclude matches	< 2%
Exclude bibliography	On		