

ANALYSIS AND COMPETITIVENESS IMPROVEMENT STRATEGY OF BESUKI RAYA SUGAR CANE

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***Abstract:** National sugar industry is interested to examine. Sugar is one strategic food commodities in Indonesia economy. National demand and import of sugar increase continuously. It is marked by the competition level to capture market share in Indonesia. One way to improve competition level of producers and farmers of sugar cane is to find the best strategy to improve their competitiveness. The study is conducted by taking locations around the sugar mill (PG) in Besuki Raya. The analysis technique used is the Policy Analysis Matrix (PAM) to determine the competitiveness of sugar cane in Besuki Raya. Alternative strategies are from the SWOT analysis and priorities are determined by Analytical Hierarchy Process (AHP). The results show that Besuki Raya sugar cane has comparative and competitive advantages. A condition of Besuki Raya sugar cane is in Quadrant III, the strategy chosen is turn-around. Alternative strategies of Besuki Raya sugar cane are SO, WO1, WO2, ST and WT strategy. The first priority of strategic alternatives is SO strategy, which use sugar cane as a strategic commodity, land suitability, human resources and experience to maximize the domestic market with support of government.*

***Keywords :** Competitiveness, Policy Analysis Matrix (PAM), SWOT Analysis, Analytical Hierarchy Process (AHP), Besuki Raya Sugar Cane*

1. INTRODUCTION

National sugar industry is interested to examine. Sugar is one strategic food commodities in Indonesia economy (Law No. 7 of 1996 and Presidential Decree No. 57 of 2004). Indonesia population reaches 250 million, with 1.25% growth per year and an income Rp. 27 million per capita per year. It makes total consumption of sugar has increased from 5.35 million tons in 2012 to 6.00 million tons in second quarter of 2014, and continued to increase to nearly 7.00 million tons in early 2015 . Meanwhile, sugar production in until mid-2014 was only 2.9 million tons, or 48.3% national need, while the rest 51.2% is met from import sugar. Imports sugar in 2012 reached 2.53 million tons, rising to 2.7 million tons in 2013, and is estimated to reach 3.7 million

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tons in 2020. National sugar demand will certainly continue to increase in line with population growth, increased revenue society, and growth of food and beverage processing industry (Nur, M., 2013, National Sugar Development-Based Approach Local Culture in Indonesia, article published in <http://rakaraki.blogspot.com/2013/01/karya-tulis-gula-nasional.html>).

Indonesia government has issued many policies to improve the national sugar production. During 1983-2009 period, government has issued sugar price adjustment 12 times to improve or at least maintain national sugar production (Sudana, 2002). The main problems of sugar cane in Indonesia are efficiency (Marta, 2011: pp.71-88). The solution is to reduce the excessive use of inputs and allocate input efficiently.

Government announced a Sugar Self-Sufficiency program 2009-2014 in an effort to reduce dependence on import sugar. Within road map for 2009-2014, Ministry of Agriculture set the target of self-sufficiency in 2014 reached 5.7 million tons, comprising 2.96 million tons white crystals sugar (GKP) and 2.74 million tons refined crystals sugar (GKR). This self-sufficiency target sugar will be obtained from existing sugar cane industry with amounted of 3.57 million tons, consist of 2.32 million tons from BUMN sugar cane industry and 1.25 million tons from BUMS sugar cane industry. In addition, there should also be additional sugar from the construction of 10-25 new sugar mills as much as 2.13 million tons. But for technical reasons, in September 2012 the Ministry of Agriculture was forced to revise the Self-Sufficient Sugar targets to only 3.1 million tons. This translates into cuts of 2.6 million tons or 45.6% of earlier target. The reason is that planned additional cane land area of 300-500 thousand hectares just reached 5,000-6,000 hectares, while the revitalization and development of a new sugar mill is not running. Therefore, it can be ascertained that sugar cane industry not longer possible to meet the needs of national sugar that continues to increase from year to year (Sujianto, R., 2012 in Nur, M., 2013, National Sugar Development-Based Approach Local Culture in Indonesia, article published in <http://rakaraki.blogspot.com/2013/01/karya-tulis-gula-nasional.html>).

East Java covers 32 regencies and cities with production produce 1.4 million tons of sugar cane in 2015. Besuki Raya, consist of Banyuwangi, Jember, Bondowoso, and Situbondo, contribute about 9.2% of total production of East Java sugar cane with an area of 22.09 thousand hectares (The Central Bureau of Statistics East Java, 2015).

There are the decrease pattern of sugar cane production in Besuki Raya from 2008-2014. The productivity issue becomes major problem of sugar manufacturers and cane farmers. Low productivity could be improved by solving the issues at farm level and regulation of government policy. Problem solving of low productivity of sugar cane can be done by expanding the area (Zaini, 2008: 1-9; Judge, 2010: 5-12), government policies that can protect the sugarcane farmers (Zaini, 2008: 1-9; Santosa, 2011: 18-39), and increased productivity and labor efficiency (Saptana et al., 2004; Asmarantaka 2011; Marta, 2011: 71-88). Indonesian sugar industry issues still revolve around the gap between low production capacity (productivity) low and efficiency of sugar

factories. Indonesia has trend of sugar demand (consumption) that continues to increase (Indonesian Sugar Council, 2011).

These complex problems require the strategic steps to resolve these problems. National sugar demand is certainly growing and influx of imported sugar also increases. It is marked by competition level to capture market share in this country. One way that can be taken by producers and farmers of sugar cane to face competition in this industry is to find the best strategy to improve their competitiveness.

2. RESEARCH SCOPE

This study analyzes the competitiveness of sugar cane production from sugar mill in Besuki Raya (hereinafter written Besuki Raya sugar cane) and formulating a right strategy to increase the competitiveness to be recommended to policy makers (government), sugar producers and sugarcane farmers. This study is limited to formulation of strategic alternatives.

3. LITERATURE REVIEW

3.1. Concept and Theory of Competitiveness

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

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

Competitiveness is productivity; it defined as output produced by labor. Competitiveness is determined by a company's competitive advantage and very depends on relative level of resources it has. Porter (2001: 12-14), explains the importance of competitiveness for following three points: First, boosting productivity and improve the ability of self. Second, increasing the capacity of economy, both in context of regional economy as well as the quantity of economic actors so that economic growth is higher. Third, 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 of company profitability compared with other companies for same industry will makes company has higher competitiveness.

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 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 be able to build a global 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). Haryono et al., (2011), Neptune (2006), Gerungan et al., (2013), Ratna et al., (2013), Emelda and Mappigau (2014) measure and analyze the competitiveness of agribusiness products use PAM as analysis tool

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

PAM results can be used to determine whether a country's competitiveness is high or low in a system of commodity production technology based on certain regions, as well as how a policy can improve the competitiveness through the creation of business efficiency and revenue growth. PAM can be used to measure the competitiveness of a commodity and also see the extent the impact of policy to input and output prices, or a combination of both the government and manufacturer.

Policy Analysis Matrix (PAM) can identify profit analysis (private and social), competitiveness analysis (comparative advantage and competitive advantage) and analyzing the impact of policies (Monke and Pearson, 1989: 10-19). Assumptions used in PAM are follows: First, the calculation is based on private cost, the price actually received by producers and consumers or prices that occurred after the policy. Second, the calculation is based on social cost or shadow price, ie 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. Third, tradable output and input can be classified into components of tradable and non-tradable components. Fourth, positive and negative externalities are considered to cancel each other out.

3.2. Competitiveness Improvement Strategy

SWOT Matrix is an important matching tool to help managers to develop four following types of strategies: SO (strengths-opportunities), WO (weaknesses-opportunities), ST (strengths-threats), and WT (weaknesses-threats). Preparation of strategy at enterprise level needs to be reviewed as part of competition. Preparation of strategy at enterprise level is also useful to enhance the competitiveness of companies, both locally and internationally (Oral, 1993; Offstein et al., 2007). SWOT analysis still plays an important role in strategic planning process of few large companies (Afuah, 2009: 324). Utilization of SWOT analysis is based on logic to maximize the strengths and opportunities, but at the same time to minimize the weaknesses and threats (Rante, 2013). SWOT analysis is one tool to develop a strategy for a 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 as the basis to choose the right strategy (Hill and Jones, 2009: 7). The analysis results of internal and external environment will provide an overview of a company's position in a space matrix. The strategy success will depend on ability and accuracy of data analysis of internal and external environment of a company. SWOT analysis will produce four strategies. SO (strengths-opportunities) strategy uses the company's internal strengths to take advantage of external opportunities. WO (weaknesses-opportunities) strategy is aimed to improve the internal weaknesses to exploit external opportunities. ST (strengths-threats) strategy uses the company's strength to avoid or reduce the impact of external threats. WT (weaknesses-threats) strategy is a defensive strategy aimed to reduce internal weaknesses and avoid external threats. Priority of strategy selection is based on analysis results of Analytical Hierarchy Process (AHP) to determine the best strategy to improve the competitiveness of a commodity.

4. RESEARCH METHODS

The study was conducted at a sugar mill (PG) around Besuki Raya. They are (1) PG Asembagus Situbondo; (2) PG Wringinanom Situbondo; (3) PG Olean Situbondo; (4) PG De Maas Besuki Situbondo; (5) PG Pandji Situbondo; (6) PG Prajekan Bondowoso; (7) PG Semboro Jember; (8) PG Jatiroto Lumajang; (9) PG Kabat Banyuwangi; (10) PG Soeko Widi Banyuwangi; and (11) PG Rogodjampi Banyuwangi.

The research location is determined intentionally by some following measures. First, a sugar mill in Besuki Raya is faced with various problems related to productivity and competitiveness. Second, a sugar mill generally has advantages in their respective markets. In other words, there is no monopolistic player in the market.

This study is a combination of exploratory research, descriptive and explanatory. Exploratory research is conducted to obtain information related to an in-depth comparison of sugar cane competitiveness and preparation of several alternative strategies to

increase competitiveness to be implemented 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 observing the existing documents. The questions asked had been developed previously by systematic and guided by a questionnaire which has been valid and reliable. The secondary data is information or data from related agencies as well as literature books, journals or various forms of publications as listed in References.

Analysis of experimental data to determine the competitiveness of sugar cane at Besuki Raya using PAM (Monke and Pearson, 1989: 10-19). Furthermore, SWOT analysis is used to formulate an alternative strategy to increase the products competitiveness and continued with AHP to recommend strategic priorities.

5. RESEARCH RESULT AND DISCUSSION

5.1. Competitiveness Analysis of Besuki Raya Sugar Cane

The competitiveness of Besuki Raya sugar cane can be seen from the two indicators, comparative advantage and competitive advantage of product. PAM analysis results of Besuki Raya sugar cane can be seen in Table 1 below.

Table 1 shows that sugar cane tradable inputs of Besuki Raya are Rp. 6,581,354 per hectare. It is covered with high profits reached Rp. 6,008,718 per hectare, while the revenues (output) reached Rp. 57,190,523 per hectare.

Positive divergence of Rp. 7,555,093 per hectare on output revenues shows that from social price of sugar cane that lower than the farmers price. This happens because the social price of sugar cane is calculated based on price of imported sugar that lower than the price of local sugar. Negative divergence on tradable input costs of Besuki Raya sugar cane at Rp. -69.027 per hectare is occurred because the social price of tradable inputs such as fertilizer are higher than private prices. Although tradable inputs such as pesticides is lower than private prices, overall price of tradable inputs is greater than the price received by farmers. This indicates a government policy or market distortions to make tradable input at social price is higher than the financial price, such as the fertilizer subsidy, import tariffs and value added tax. On other hand,

Table 1
PAM Analysis Results of Besuki Raya Sugar Cane

<i>Description</i>	<i>Revenues</i>	<i>Costs</i>		<i>Profits</i>
		<i>Tradable Inputs</i>	<i>Domestic Factors</i>	
Private prices	57.190.523	6.581.354	44.600.451	6.008.718
Social prices	49.635.430	6.650.381	38.100.756	4.884.293
Divergences	7.555.093	-69.027	6.499.695	1.124.425
	DRC = 0,886		PCR = 0,881	

a positive divergence of Rp. 6.499.695 per hectare in non-tradable input costs are occurs because the cost of social factor is lower than the cost of private. This indicates that sugar cane farmers have to spend more on domestic factors than social cost factor. This is occurred because of government policy or market failure to use domestic factors as fertilizer used by sugarcane farmers. Positive divergence is also caused by cost of domestic factors as higher wages payment of social price. This is because workers for planting, maintenance and harvesting in sugar cane farming is outsourcing and generally are not educated so that private prices is higher than the social workers price for planting, maintenance and harvest.

The positive divergence of Rp. 1,124,425 per hectare in revenue occurred due to financial revenues of farmers is greater than the social revenues. It is an accumulation the effects of price divergence of output and input costs both tradable and non-tradable.

5.2. Comparative and Competitive Advantage of Besuki Raya Sugar Cane

Table 1 shows that Besuki Raya sugar cane has a comparative advantage. This is demonstrated by coefficient of Domestic Resource Cost (DRC) of 0.886 lower than 1.00. It means meaning that Besuki Raya sugar cane has a comparative advantage to use domestic resources. This analysis results show local support factors as labor resources, climate, land. These support can save 11.4% cost compared to abroad. DRC coefficient of 0.886 or 88.6% will provide economic benefits of 11.4% from total cost.

Table 1 shows that Besuki Raya sugar cane has a competitive advantage. It is indicated by coefficient of Private Cost Ratio (PCR) of 0.881 less than 1.00. It means that Besuki Raya sugar cane has competitive advantages to use of domestic resources. PCR coefficient of 0881 or 88.1, indicates that Besuki Raya sugar cane has the ability to compete at 11.9%. It means that production cost of sugar cane per kilogram less than the 11.9% compared to abroad production.

5.3. Formulation of Strategic Alternatives using SWOT Analysis

SWOT analysis is one tool to develop a company strategy to prepare and determine the strategy to improve their competitiveness. SWOT analysis is based on logic to maximize the strengths and opportunities, but at same time to minimize the weaknesses and threats. Factors of strengths, weaknesses, opportunities, and threats are defined for Besuki Raya sugar cane. Internal Factor Evaluation (IFE) and External Factor Evaluation (EFE) of Besuki Raya sugar cane can be seen in Table 2 and 3 below.

Table 2 show that sugar cane as a strategic commodity has highest internal factors at 4 point. Sugar cane as strategic commodity has best internal factor than other. Sugar cane as a strategic commodity and sugar factories have the highest weighting, namely 0.20. It means that both internal factors considered most important compared with other internal factors. Besuki Raya sugar cane is a strategic trading commodities and plays an important role for regional and national economy to provide employment. The weakness internal factor and having highest

Table 2
Internal Factor Evaluation (IFE) of Besuki Raya Sugar Cane

<i>Internal Factors</i>	<i>Weight (a)</i>	<i>Level (b)</i>	<i>Value (a x b)</i>
Strength			
1. Strategic commodities	0,20	4	0,80
2. Land suitability	0,10	3	0,30
3. Human resources support	0,05	2	0,10
4. Golden production era	0,05	2	0,10
Total (A1)			1,30
Weakness			
5. Land availability	0,05	3	0,15
6. Sugar cane price	0,05	2	0,10
7. Production cost	0,10	3	0,30
8. Product quality	0,10	2	0,20
9. Sugar mill existence	0,20	3	0,60
10. Supporting infrastructure	0,10	2	0,20
Total (A2)			1,55
Grand Total			2,85
Spread			-0.125

Table 3
External Factor Evaluation (EFE) of Besuki Raya Sugar Cane

<i>External factors</i>	<i>Weight (a)</i>	<i>Rating(b)</i>	<i>Value(a x b)</i>
Opportunity			
1. Domestic consumer	0,15	4	0,60
2. Market	0,10	3	0,30
3. Selling	0,10	3	0,30
4. Government support	0,15	3	0,45
5. SNI of refined Chrystal sugar (GKR)	0,05	2	0,10
6. Overhead production of sugar industry	0,05	2	0,10
Total (B1)			1,85
Treat			
7. Sugar alternative product	0,05	3	0,15
8. Refined import sugar	0,20	4	0,80
9. Climate uncertainty	0,15	3	0,45
Total (B2)			1,40
Grand Total			3,25
Spread			0.45

weighting is presence of a sugar mill at 0.20. The existence of a sugar mill is expected to drive the farmers. Existence of sugar mill become major weakness for sugar mill conditions because efficient in their production processes. The existence of a sugar mill is same important as the production cost and availability of land at ranking 3. The total score of Strength is 1.30, smaller than the total score of weakness at 1.55. Score difference for strength and weakness is equal to -0.25. This score difference is the value of X (Figure 1). It will determine the development position of Besuki Raya sugar cane in SWOT matrix.

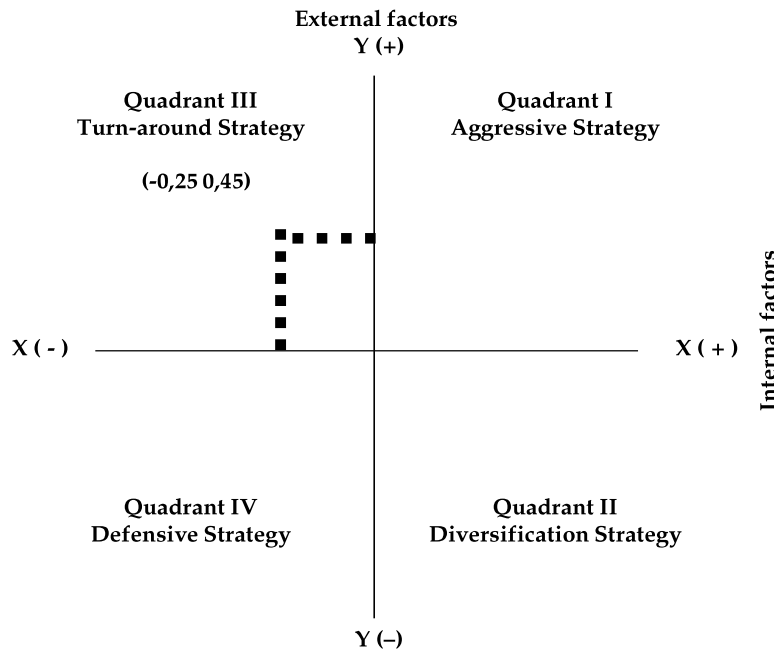


Figure 1: Development Position Matrix of Besuki Raya Sugar Cane

Table 3 shows that external factors with highest ratings fourth point is the domestic consumption for opportunities and presence of import refined sugar to threats. It means that domestic consumption and presence of import refined sugar is the most important factor compared to other external factors. Import refined sugar became the most dominant threat that very disturb the production of Besuki Raya sugar cane. Sugar cane as domestic consumption and government support have the highest score, namely 0.15. It means that both external factors are considered to have the most impact compared with other opportunities. The total score is 1.85, higher than the total score of threat of 1.40. Difference in weighted scores is Y value (Figure 1). It will determine the development position of Besuki Raya sugar cane in SWOT matrix, as shown in Figure 1 below.

Figure 1 shows that Besuki Raya sugar cane is in Quadrant III with choice of turn-around strategy. Besuki Raya sugar cane has a large market opportunity, but also have some internal weaknesses. The strategy in this condition is to minimize its internal problems to seize the market opportunities better. Alternative strategies that can be recommended in SWOT matrix at Figure 2 below.

5.4. SO Strategy

SO strategy uses strength to take advantage of opportunities. Based on SWOT matrix Besuki Raya sugar cane obtained SO strategies. It uses sugar cane as a strategic

IFEEFE	STRENGTHS (S) 1. Strategic commodities 2. Land suitability 3. Human resources support 4. Golden production era	WEAKNESSES (W) 1. Land availability 2. Sugar cane price 3. Production cost 4. Product quality 5. Sugar mill existence 6. Supporting infrastructure
OPPORTUNITIES (O) 1. Domestic consumer 2. Market 3. Selling 4. Government support 5. SNI of refined chrystal sugar (GKR) 6. Other production of sugar industry	SO STRATEGY: Using sugar cane as a strategic commodity, land suitability, human resources and experience to maximize the domestic market with support of government (S1, S2, S3, S4, O1, O3, O4, O5)	WO STRATEGY: 1. Utilizing the market to produce byproducts by maximizing tools, presence of sugar factories (W2, W5, W6, O2, O4, O5) 2. Improving the selling price by improving the quality of land, quality of product (SNI), costs of production, and byproducts (W1, W3, W4, O4, O5, O6).
THREATS (T) 1. Sugar alternative product 2. Refined import sugar 3. Climate uncertainty	ST STRATEGY: Utilizing the experience to produce a type of alternatives sugar and conduct research and technology development (S3, S4, T1, T3)	WT STRATEGY: Cooperation between the sugar mill to produce a alternative sugar that can decrease the import refined sugar (W1, W2, W5, W5, T2)

Figure 2: SWOT Matrix of Besuki Raya Sugar Cane

commodity, land suitability, human resources and experience to maximize the domestic market with support of government. The government support is a policy that can protect sugarcane farmers (Zaini, 2008: 1-9; Santosa, 2011; Lukito et al., 2013).

5.5. WO Strategy

WO strategy is done to solve the weakness by utilizing the existing opportunities. Based on SWOT matrix of Besuki Raya sugar cane, there are two WO strategy below.

1. WO1 Strategy: Utilizing the market to produce byproducts by maximizing tools, presence of sugar factories. This strategy is required to address the low productivity of Besuki Raya sugar cane. The sugar mill can produces sugar and also produces molasses, filter cake, boiler ash and bagasse as a byproduct. A byproduct of sugar cane production is generally not fully utilized to increase the income of sugar producers (Lukito et al., 2013).
2. WO2 Strategy: Improving the selling price by improving the quality of land, quality of product (SNI), costs of production, and byproducts. Through government support in form of policies and standardization of product quality, Besuki Raya sugar cane may become one products plantations which deserve attention for their domestic market that still needs a lot of sugar cane products (Marta 2011: 71-88).

5.6. ST Strategy

ST strategy uses the strength to anticipate the threat. Based on SWOT matrix, Besuki Raya sugar cane obtained ST strategy. It used to harness the experience to produce a type of sugar alternatives and conduct research and technology development. Research and technology is expected can lead to development of alternative sugar markets, attract investors to grow sugar industries, and triggering experts in field to explore various potential sources of sugar. Development of production techniques to increase the sugar extract (saccharification of starch into sucrose, lowering the sucrose inversion and fermentation reactions) also will maintain climate of sugar industry to become more attractive alternative.

5.7. WT Strategy

WT strategy minimizes the weaknesses and to anticipate threats. Based on SWOT matrix, Besuki Raya sugar cane obtained WT strategy. It uses collaboration of sugar mill to produce a sugar alternative that can stymie the refined sugar imports.

5.8. Prioritizing Strategies by Analytical Hierarchy Process (AHP)

The proposed alternative strategies are analyzed by Analytical Hierarchy Process (AHP). AHP resolve problems in an organized framework. I can be expressed for effective decisions. 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.

The level importance of each variable is given a numerical value subjectively based on importance of these variables and in relative terms 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. Based on Figure 2, there are five alternative strategies for Besuki Raya sugar cane, namely SO, WO1, WO2, ST and WT strategies. AHP analysis results produce strategic priorities.

There are alternative strategies priority to improve the competitiveness of Besuki Raya sugar cane. The first priority of strategic alternatives with weight 0.326 is SO strategy, which use sugar cane as a strategic commodity, land suitability, human resources and experience to maximize the domestic market with support of government. The second priority of strategic alternatives with weight 0.320 is WT strategy. It uses cooperation between the sugar mill to produce a sugar alternative that can decrease the refined sugar imports. The third priority of strategic alternatives with weight 0.166 is ST strategy. It harness the experience to produce alternatives sugar and conduct research and technology development. The fourth priority of strategic alternatives with weight of 0.100 is WO1 strategy. It takes advantage of market to generate byproducts by maximizing tools and presence of a sugar mill. The fifth priority of strategic alternatives with weight 0.089 is a WO2 strategy. It increase the sale price by improving the quality of land, quality of products (SNI), production cost and byproducts.

6. CONCLUSIONS AND SUGGESTIONS

Besuki Raya sugar cane has comparative and competitive advantages. This is indicated by DRC and PCR coefficient that smaller than 1 (DCR = 0.886 and PCR = 0.881). Besuki Raya sugar cane is in Quadrant III with choice of strategy is a strategy turn-around. Besuki Raya sugar cane has a large market opportunity, but on other hand faced some internal weaknesses. The focus of the strategy in this condition is to minimize its internal problems to seize the market opportunities better. Alternative strategies of Besuki Raya sugar cane are SO, WO1, WO2, ST and WT strategy. The first priority of strategic alternatives is SO strategy, which use sugar cane as a strategic commodity, land suitability, human resources and experience to maximize the domestic market with support of government. Second, WT strategy. It uses cooperation between the sugar mill to produce a sugar alternative that can decrease the refined sugar imports. Third, ST strategy. It harness the experience to produce alternatives sugar and conduct research and technology development. Fourth, WO1 strategy. It takes advantage of market to generate byproducts by maximizing tools and presence of a sugar mill. Fifth, WO2 strategy. It increase the sale price by improving the quality of land, quality of products (SNI), production cost and by products.

Future research should study the broader scope and more detailed to obtain more comprehensive answers related to internal problems faced by Besuki Raya sugar cane. The research should in-depth on giving strategic alternatives that have been recommended to provide the best strategies in improving the competitiveness of Besuki Raya sugar cane.

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