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Spices Coffee : Innovation Strategy To Increase Quality On Powder Coffee Farmers

I T Amir¹, P N Indah², S Widayanti³

^{1,2,3}Department of Agribusiness, Agriculture Faculty,
University of Pembangunan National “Veteran” East Java,
Gunung Anyar 1. Surabaya, Indonesia

¹indra_ta@upnjatim.ac.id

²pawana_ni@yahoo.com

³widayanti123@yahoo..id

Abstract. The purpose of the study is a) to analyze the condition of internal environment industry spices coffee , b) to analyze the condition of the external environment industry spices coffee , and c) to determine the technological innovation strategy spices coffee in order to improve the competitiveness of the coffee people. Most of the coffee grown in Tatur district is cultivated by smallholder farms, resulting in low quality. The strategy of coffee spice agro-industry aims to increase the added value of the products so that farmers obtain higher coffee prices. Activities include the provision of raw materials, processing, supply of final products, and marketing. The results showed that the internal environmental conditions that have the highest value is the strengthen factors. The highest score of strengthen factors is the availability of coffee, availability of labor and communications group. The highest score of opportunity factors is technological assistance from the government and other government support for the development of people's coffee industry and high market potential. The development of agro-tourism should improve as well as expand the network to seize market. The strategy should be applied in the development of spices coffee industry is to support aggressive growth (Growth-oriented strategy).

1. Introduction

Coffee is one of the plantation commodity included in the category of strategic commodities. This commodity is important for meeting the needs of domestic as well as foreign exchange export commodity. In East Java, the coffee commodity cultivated by smallholder, big state plantation and big private plantation. Coffee acreage in East Java in 2015 covers 99,122 hectares. The area of coffee plantations covers an area of 59 448 ha (58.99%) of the total acreage of coffee in East Java. The rest is owned by the Big State Plantation area of 21 327 ha (21.15%) and Big Private Plantation 20 032 ha (19.86%). Indonesia is the world's fourth exporter of the commodity of coffee, with the role of an average of 4.76 percent of total world exports. Brazil occupies the first position with the role of an average of 26.48 percent, followed by Vietnam and Colombia amounting to 17.43 percent amounting to 11.15 percent (ICO, 2016). There are more than 13 major export destination countries of Indonesian



coffee. Destination countries of Indonesian coffee export whose main role is the United States with a market average of 15.23 percent of the total coffee exports Indonesia. It is followed by Japan, Germany, Italy, and Malaysia respectively with the role of the market an average of 10.77 percent; 9.92 percent; 7.77 percent; and 7.61 percent (BPS, 2016).

In the era of globalization, competition is getting tougher conditions in which individual countries to open their markets to each other. Development of diversification of processed coffee products, such as roasted coffee, instant coffee, coffee mix, decaffeinated coffee, soluble coffee, coffee beer (beer coffee), ice coffee is significant because it can be a commodity that has high competitiveness in the international market. Indonesia as a tropical country in addition to a chance for the development of diversified products processed coffee is also potential for the development of processing industry products with a distinctive flavor of coffee specialties such as; Lintong Coffee, Coffee Lampung, Java Coffee, Kintamani Coffee, Coffee Toradja. In the future, agro-industries can become the locomotive of national economic growth. There are at least five major reasons that a sense of optimism, namely: (1) The processing industry capable of changing comparative advantage into competitive advantage, which ultimately will strengthen the competitiveness of the product; (2) The products have value-added agro-industry and large market share so that it can affect the growth of the national economy; (3) agro-industry has great relevance to both upstream and downstream, so as to attract the progress of other sectors; (4) has a base of local raw materials (comparative advantage) to guarantee sustainability; and (5) a chance to change the structure of the national economy from agriculture to industry.

Most of the coffee grown in the district Tukur is cultivated by smallholder agriculture. Coffee quality is low because farmers typically pick the fruit is arbitrary and process them dry. By decreasing the competitiveness of coffee, it is necessary the creation of a new superior product recall product live-cycle shorter cycles and consumer appetite for quick product change. Empowerment through technology innovation and economics of the traditional drinks industry is required by coffee-spices agro-industry in the districts of Tukur. Empowerment of coffee-spices agro industries aim to increase the value-added products so that farmers obtain higher selling prices of coffee. The activities include the supply of raw materials, processing, supply of final products, and marketing.

The purpose of this study was a) to analyze the condition of internal environment coffee-spices industry, b) to analyze the condition of the external environment coffee-spices industry and c) to determine the strategy of technological innovation in order to increase the coffee competitiveness of people's coffee.

2. Literature and Method

Mishra, A. (2015) stated that several previous studies related to the research to be undertaken, are the basis or foundation that is strong enough for the development of research to be undertaken. One of the major drawbacks of a fully integrated organization is its lack of flexibility. Therefore, in many cases, the organization does not invest enough in environmental scanning or tends to normalize unfavorable forecasts. Hence, on occasion, not only do chance pass by, but the threats come more as a shock and this has a permanent debilitating effect on the organization. According to Day and Schoemaker (2006), "the biggest dangers to any company are here to come, and understanding these threats - and anticipating opportunities - requires strong peripheral vision".

The main issues which influence management development in the China have been identified by SWOT analysis. The current and future situation of Starbucks in China is criticized by means of quantified SWOT analysis (Sholihah, P.I. et al, 2016). Accordingly, Starbucks has a great potential for China consumers attraction. The strong points are the strong brand equity with high quality coffee and excellent customer service "The Starbucks Experience" lends a competitive edge, existence of valuable developed excellent skills in franchise management, and Favorable access to distribution networks. However,

Starbucks is seen as an “American Global”, possible perception that big American chains are trampling on national cultures, “Starbucks was trampling on Chinese culture”. Therefore, Starbucks has been doing innovate products and services.

Alvarado, R.A., and. Linnemann, A.R. (2010) observe that the review sheds light on the utility of the SWOT model in this sector. It reveals that the model, which is borrowed from the business world, has been employed only rarely and with little modification in the energy sector. Second, it develops and proposes a modified version of the model for use in assessing energy technologies in developing regions. Ambe J.Njoh. 2017. Results from the cupper gave a high variability of the coffees evaluated. The results of the consumer panel demonstrated that discrimination between coffees by consumers was predicted by acidity differences assessed by the cupper. The same held for body but not necessarily for fragrance and aroma. Carvalho, J.M., et al (2016) confirm the cases studies pointed out differences between the two groups of coffee shops in relation to their supply chain strategies. The first group can be called Independent Coffee Shops, since they are focused on the coffee preparation business. The second group can be called Integrated Coffee Shops, due to the fact that these organizations are responsible to manufacturing activities in addition to the coffee preparation activities. Despite this supply chain configuration difference, both groups have a similar perception about their role for the final consumer, to provide a premium experience with coffee.

Kanjanakom, A and Lee, H. (2017) stated that coffee drinking emotion changes were evaluated using two emotion questionnaires, Essense Profile and Coffee Drinking Experience (CDE). Voluntary customers from coffee shops rated emotions pre and post consumption. EsSense Profile® and product specifically developed questionnaire (CDE) provided similar results of emotion changes for common terms. Essense Profile did not capture influence of coffee that was captured as jump-start, jolted, and boosted by CDE

2.1. Research Area

This research raised the theme of technological and economic innovation of spices coffee to improve the welfare of peasant coffee farmers. The study will be focused on smallholder powder coffee farmers in the Tukur Sub district of Pasuruan District. The reason for choosing Tukur Subdistrict is a central area of people coffee production and including the area of coffee commodity development in East Java province is quite potential.

2.2. SWOT Analysis and Data

The target population is determined two sample villages, i.e. Andonosari and Tukur. The population is coffee farmers who cultivate coffee and conduct processing up to the coffee powder. Samples were taken based on purposive sampling and the magnitude of the farmers from was set to take 44 farmers both village centers in Tukur. SWOT analysis (Strength, Weakness, Opportunities, and Threats) analysis is used to analyze the purpose of the study is to analyze the internal and external environmental conditions and determine the strategy of technological innovation in order to increase competitiveness of people's coffee.

3. Results And Discussion

3.1. Analysis of the Internal Environment Condition

The initial step of the SWOT analysis for the coffee community empowerment is done by identifying, weighting, rating and value of internal factors that influence the development of people's coffee through coffee spices. After identification, weights, rating, and the value of the internal factors that are relevant to the development of people's coffee, then continued with the analysis of these factors. This analysis

will be compiled in the form of analysis matrix of internal factors and synthesis matrix of the results of the analysis in the form the basic direction strategic.

Table 1 and 2 show that internal factors in the development of the coffee industry in Tutar Pasuruan who have the highest total value is strength factors by the number of 3.41 (Table 1). There are three variables of the highest strength factors in spices coffee industry is the availability of coffee, availability of labor and communications group. The total score of the factors of weakness is 3.28 (Table 2). Total value of the weakness factors that have the highest value is capital of farmer groups and diversification of coffee powder. Gap between the strength factors and weakness factors is 0.13. It can be concluded that the industry condition of people's coffee have greater strength than weakness in the development of the coffee-spices industry Tutar in Pasuruan.

Table 1. Matrix Analysis of the Strength Factors Weighting

Strengths				
No	Breakdown	Weight	Rating	Value
1	The availability of labor	4	0.13	0.49
2	Labor Skills	3	0.09	0.26
3	Availability of coffee	4	0.13	0.51
4	The typical flavor of coffee	4	0.12	0.43
5	Using pure coffee	3	0.11	0.37
6	Group communication	4	0.12	0.45
7	Communication with consumers	4	0.12	0.42
8	Supporting institutional	3	0.09	0.23
9	The availability of agriculture field officer	3	0.09	0.25
The Number		30	1.00	3.41

Notes: very strong = 5; strong = 4; strong enough strong = 3, = 2; very strong= 1
Source: Author's analysis

Table 2. Matrix Analysis of the Weaknesses Factors Weighting

Weaknesses				
No	Breakdown	Weight	Rating	Value
1	Capital of farmer groups	4	0.19	0.70
2	Powder coffee diversification Efforts	4	0.18	0.63
3	Limitations of the Fund	3	0.16	0.51
4	Coffee processing technology	3	0.14	0.36
5	Extensification cropping	3	0.18	0.60
6	Licensing of food control	3	0.16	0.48
The Number		19	1.00	3.28

Notes: very weak = 5; weak = 4; pretty weak = weak, 3 = 2; a little weak = 1.
Source: Author's analysis

3.2. Analysis of the External Environment Condition

The next step of the SWOT analysis for the coffee community empowerment is done by identifying, weighting, rating and value of external factors that influence the development of people's coffee through spices coffee . This analysis will be compiled in the form of analysis matrix of external factors and synthesis matrix of the results of the analysis in the form the basic direction strategic.

Table 3 and 4 show that external factors on the development of the people coffee industry in Tukur Pasuruan who have the highest total score is opportunity factors in the amount of 3.36. The highest score of opportunity factors is technological assistance from the government and others, government support for the people and the coffee industry development high market potential. The development of agro tourism should improve as well as expand the market network to seize opportunities.

Total score of threat factors of development of the people coffee industry in Tukur Pasuruan have 3.13. The highest score of threat factors is the change in consumer preference against instant coffee, land conversion and inter-agency rivalry. The difference between the opportunity and the threat factor is 0.23. It can be concluded that the people coffee industries in Tukur Pasuruan have greater opportunities than threats in the development of the people coffee industry in Tukur Pasuruan.

Table 3. Matrix Analysis of the Opportunity Factors Weighting

Opportunities				
No	Breakdown	Weight	Rating	Value
1	Technology help from outside institutions and Government	4	0.14	0.53
2	Partnerships with outside parties	3	0.10	0.28
3	Government program supports against the industry development of powder coffee	4	0.13	0.46
4	Product price of powder coffee	3	0.11	0.34
5	The potential market share spaciouly	4	0.14	0.53
6	Services stripping and cleaning the coffee bean	3	0.13	0.44
7	Request towards spices coffee	3	0.13	0.45
8	Agrotourism Coffee	3	0.11	0.32
Amount		27	1.00	3.36

Notes: very chance = 5; chance = 4; enough chance =3, less chance = 2; very less chance = 1.

Source: Author's analysis

Table 4. Matrix Analysis of the Threat Factors Weighting

Threats				
No	Breakdown	Weight	Rating	Value
1	Rivalry between farmer groups	3	0.18	0.49
2	Pests or natural disasters	3	0.16	0.41
3	Conversion of plantation	3	0.21	0.65
4	The immature state of supporting the processing of agricultural products, especially packaging and warehousing	4	0.23	0.83
5	Changes in consumer preferences towards instant coffee	3	0.22	0.76
Jumlah		15	1.00	3.13

Notes: strong threat = 5; threat = 4; enough threat = 3, less threat = 2; very less threat = 1..

Source: Author's analysis

The conclusion that can be drawn from the above analysis shows that the development of the people coffee industry in Tukur including sub-sectors as follows, the difference between Strength and Weakness values is 0.13 dan , the difference between Opportunities and Threats values is 0.23.

Mapping the score balance produces the development of the coffee industry in Tukur Pasuruan people with X-axis (0.13) and Y-axis (0.23). The results showed that the industrial development of people's

coffee sector in the position of Quadrant I, it means the development of the people coffee industry in Tatur Pasuruan have a favorable situation, namely the development of the people coffee industry in Tatur Pasuruan has strengths and opportunities so that the strength that can be used to take advantage of existing opportunities. The strategy should be applied in these circumstances is to support aggressive growth (Growth-oriented strategy).

Based on the analysis identifying internal and external factors, it can be prepared the relevant strategic in the development of the economic potential of the agricultural sector and its main sub-sectors in as presented in Figure 2.

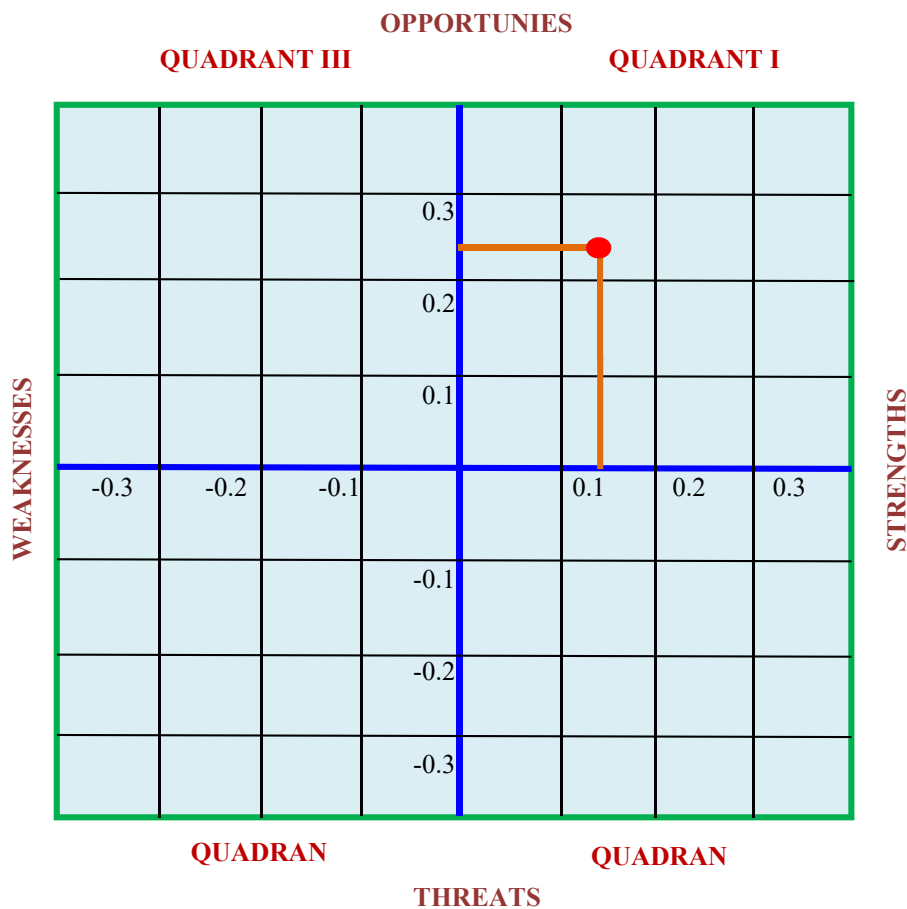


Figure 1. The Quadrant of Determination of Policy Strategies of Agroindustry Development Coffee-Spices in Pasuruan through SWOT Matrix

INTERNAL FACTORS	STRENGTH (S)	WEAKNESSES (W)
	<ul style="list-style-type: none"> • Availability of labor • Skilled labor • Availability of coffee Tuttur • Taste the typical Tuttur • Material pure coffee • Communication group • Communication with customers • Supporting institutional • Adequacy Agricultural Officer 	<ul style="list-style-type: none"> • Capital of farmer groups • Business diversification • Limited funds • Coffee Processing Technology • Expansion of the coffee acreage • Licensing of food control
EXTERNAL FACTORS	STRATEGY (S-O)	STRATEGY (W-O)
OPPORTUNITIES (O)	<ul style="list-style-type: none"> - Develop coffee-spices industry (specialty) based SMEs. - Increase the capacity and institutional synergy and partnerships supporting element. - Increase brand image spices coffee to the market with aggressive promotions. - Synergize spices coffee with coffee agro-tourism concept. - Increasing people's income to realize the improvement of people's coffee technology innovation 	<ul style="list-style-type: none"> - Increase the availability of quality seeds of superior agricultural commodities - Enhancing human resource capabilities in the utilization of natural resources and sustainable agricultural technologies and agro-environment - Improve working capital assistance from the government as a means of agro-tourism, promotion and marketing
THREATS (T)	STRATEGY (S-T)	STRATEGY (W-T)
<ul style="list-style-type: none"> • Competition coffee group • Pests or natural disasters • Treatment facility was not yet ready • Changes in consumer preferences towards instant products 	<ul style="list-style-type: none"> - Improve the optimization and intensification of agricultural land - Initiate and enhance partnerships and cooperation has been established with relevant stakeholders - Encourage the creation of brand development in agricultural commodities - Produce good quality spices coffee and marketing based on e-commerce. 	<ul style="list-style-type: none"> - Increase the value added through the optimization of post-harvest management and control systems and distribution networks - Enhance the intensity of the promotion of agricultural commodities - Conduct coffee production planning effective and efficient and to strengthen marketing

Figure 2. Matrix Synthesis Analysis (Tutorial Strategy)

People's coffee development strategy is a document used as guidelines and instruments to achieve the realization of the development Policy of Agro-Industry Coffee-Spices and characteristics of the primary sector businesses that support people's coffee farmers integrated between industries.

Aggressive Strategy (S-O) is the development of the people coffee industry in Tuttur Pasuruan by taking advantage of opportunities and improve the strength of which must take precedence among others:

- a. Develop the coffee-spices industry (specialty) based SMEs.
- b. Increase the capacity and institutional synergy and partnerships supporting element.
- c. Increase brand image spices coffee to the market with aggressive promotions.

- d. Synergizing coffee-spices with the concept of coffee agro tourism
- e. Increasing people's income to realize the improvement of people's coffee technology innovation

4. Conclusions

The highest value of internal factors of environmental conditions the development of the people coffee industry in Tukur Pasuruan is a factor of strength of 3.41. There are three variables of the highest strength factors in people's coffee industry Tukur District of Pasuruan is the availability of coffee Tukur, availability of labor and communications group.

The highest value of external factors of environmental conditions the development of the people coffee industry in Tukur Pasuruan is a factor of opportunity of 3.36. The highest score of opportunities factor is technological assistance from the government and other government support for the people and the coffee industry high market potential. The development of agro-tourism should improve as well as expand the network to seize market opportunities.

The strategy must be applied in the development of the people coffee industry in Tukur Pasuruan is to support aggressive growth (Growth-oriented strategy). This strategy is advantageous development of the coffee industry of the people who have the strengths and opportunities so that the strengths that can be used to take advantage of existing opportunities.

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