Strategy of Improving the Farmers’ Adoption to Temanggung Robusta Coffee’s Geographical Indication Standard

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Abstract. Temanggung Regency is a main producer of coffee in Central Java Province of Indonesia. Temanggung coffee has unique taste, as it is indicated with geographical factor. Previous studies showed the farmers’ low adoption to Temanggung Robusta Coffee’s GI standard. It made their coffee product not having added-value and incapable of competing in the market with good price. For that reason, this research aimed to formulate the strategy of improving the farmers’ adoption to Temanggung Robusta coffee’s GI standard. Data was collected through in-depth interview, observation, document study, and discussion. Thirty informants were employed in this study, coming from related office, facilitator, coffee seller, coffee maker, MPIG-KRT administrator, farmer group, consumer, and farmers. Data analysis was conducted using IFE-EFE matrix, SWOT analysis, and QSP Matrix.

1. Introduction

Coffee is getting more important to Indonesian economy as exported commodity, income source for farmer, and lifestyle among youths. Sujatmiko and Hanifah Ihsaniyati (2018)[1] suggested that “coffee becomes one of the consumption products favoured by the public whether young or adult. Since coffee is now no longer a matter of consumption alone, but a lifestyle among people who have been entrenched, its demand is always increasing from year after year”.

Most Indonesian coffees come from robusta variety (90%) and the rest come from Arabica coffee. The coffee plantation area width in Indonesia reaches 1,227,787 hectares in 2017. It is still dominated by people plantation farmers with 1,179,769 hectare-wide area (96.09%), following with private plantation 25,493 hectares (2.76%), and state plantation 22,525 hectare (1.83%) (Directorate General of Plantation, 2015) [2].

Temanggung Regency is one of coffee producers in Central Java Province. Coffee plantation is conducted on over 11,000 ha area in 2015. From the area, 8,158.55 ha is Robusta coffee plantation area with about 10,254.32 ton production or mean productivity of more than 1.2 ton/ha. Robusta coffee produced in this area is expected to be potential specialty product (specialty coffee) as it has typical taste character (Temanggung Robusta Coffee’s Geographical Indication Protection Society, 2015) [3]. To maintain its quality and to improve its competitiveness, the Temanggung Robusta coffee is protected by Geographical Indication (GI). The Geographical Indication protection of
Temanggung Robusta Coffee was proposed in 2015 and approved by Ministry of Law and Human Rights in 2016. Coffee produced and processed according to GI standard will have better added-value, higher competitiveness, and better price. The brand of robusta coffee for GI-based coffee is called Temanggung Robusta coffee. The standard specified in Temanggung Robusta Coffee GI includes physical, quality and taste, production (on farm) method, harvest and post-harvest, and processing method.

Justin Hughes (2009) [4] stated that marketing based on geographical indications (“GI-based marketing”) can bring higher incomes to these farmers. And for GI-based marketing to work, adequate legal protection of GIs is absolutely necessary. The GI protection is beneficial to: 1) giving law protection to GI product in Indonesia, 2) be a strategy of marketing GI product in domestic and overseas trade, 3) giving added-value to GI-potential product in local area and improving the local economic ability, 4) improving GI product reputation in global trade, 5) the equal treatment of GI protection and GI promotion overseas, 6) be a means of avoiding fraudulent competition (Ramli et al, 2010)[5].

Entering into Industrial Revolution 4.0, coffee farmers are also faced with global competition. Brand and branding strategy is important to win the competition. Adopting a broader GI at robusta coffee farmer level is expected to be typicality that can be distinctive competitive advantage to Temanggung robusta coffee.

Adoption process occurs since an individual hears a new idea until he/she finally implements the idea (Rogers, 2003)[6]. The adoption of GI standard has not been conducted completely by robusta coffee farmers in Temanggung. Setyowati et al (2019)[7] mentioned that the Temanggung robusta coffee farmers’ level of adoption to Temanggung Robusta coffee’s Geographical Indication standard can be said as still low on average, belonging to “being interested” stage (9.5%) according to the scale measurement of IG SOP adoption level average, but some farmers have arrived at evaluation stage (48%), some other have tried and adopted GI standard slightly (19%). Basically, Temanggung robusta coffee farmers also have very high perception on the benefit of GI application, can improve the quality of coffee, improve competitiveness, buyer’s purchasing interest, and in turn can improve the coffee farmers’ economy. However, coffee farmers still face many constraints with the application of GI standard including higher production cost, much more work time allocation and greater effort need, concern with the price obtained and farmers feeling comfortable with coffee cultivation and post-harvesting pattern implemented so far. Internal and external factors of farmers affect these farmers’ adoption level. For that reason, a solution should be sought to improve the farmers’ adoption to Temanggung Robusta Coffee’s GI standard.

Studies have been conducted widely on coffee’s geographical indication, among others, by Ningsih et al (2019)[8], Sanjaya (2016)[9], Frandika et al (2013)[10], Ellyanti et al (2012)[11]. Generally, those studies addressed GI from legal or territorial development aspect. Only few geographical indication studies reviewing adoption aspect and motivational factor affecting. Although many studies have been conducted on strategy of improving adoption, the strategic research still becomes a trend and is still desirable until today. For that reason, this research aims 1) to identify internal and external factors related to the adoption of robusta coffee GI standard, 2) to formulate alternative strategy of improving the farmers’ adoption to Temanggung Robusta coffee’s geographic indication standard, and 3) to determine the priority of strategy.

2. Method
A basic method employed in this research was descriptive one. The research took place in Temanggung Regency considering that this region has a large potency to develop coffee agribusiness and coffee agrotourism, particularly robusta coffee. The main area of robusta coffee is distributed in 11 out of 20 sub districts in Temanggung Regency. Data was collected in 4 stages including the identification of internal (strength and weakness) and external (opportunity and threat) factors, the stage of weighing and rating internal and external factors, the stage of formulating alternative strategy, and the stage of determining strategy priority. Internal factor includes production, Human Resource,
marketing, financial, organization, institution, management, and policy; while external factor includes technology development, competitor, supplier, market development, government policy, social, and cultural factors. Thirty (30) informants selected purposively were employed in this research: 2 staffs of Regional Planning and Research and Development Agency (Bappeda and Litbang), 3 staffs of Agricultural and Food Self-Sufficiency Office (Dintanpangan), 2 staffs of Industry, Trade, Cooperative, and SME office (Disperidakop and UMKM), 2 staffs Tourism Office, 1 staff of One-Stop Investment and Licensing Office (DPMPTSP), 2 intermediaries, 2 coffee shop owners, 5 consumers, 2 agricultural extension officers, 2 chairpersons of farmer groups, 2 administrators of Geographic Indication Protection Society (MPIG-KRT), and 5 farmers. Data were collected using in-depth interview, observation, document study, and discussion. Data analysis was conducted using IFE-EFE matrix, SWOT analysis, QSP matrix.

3. Result and Discussion

David (2006) [12] stated that strategy is a means of achieving the long-term target in order to achieve the objective of business, follow-up program and resource allocation priority. Rangkuti (2013) [13] stated that SWOT analysis is to identify many factors systematically to formulate strategy. This analysis builds on the logic that can maximize strengths and opportunities, and can minimize weaknesses and threats.

3.1. Internal and External Factors

Internal and external factors determining the strategy of adopting robusta coffee’s GI standard include production, HR, marketing, financial, organization, institution, management, and policy, technology development, competitor, supplier, market development, government policy, social and cultural factors. Internal factors are identified as Strength (S), Weakness (W), Opportunity (O), and Threat (T).

The strengths the Temanggung Regency has, in this case, are 1) abundant production of robusta coffee and wide area of coffee plantation, 2) geographically-indicated unique coffee taste, 3) geographical indication certificate from Ministry of Law and Human Right, 4) large number of coffee farmers affiliated with farmer groups, 5) local government policy’s support, 6) many coffee and tourism events, 7) the appearance of Temanggung coffee entrepreneurs, 8) Temanggung potential tourism, and 9) Temanggung coffee winning some coffee contests at both national and international levels.

The weaknesses include 1) farmers’ low adoption to GI standard, 2) narrow land ownership, 3) farmers’ limited competency and willingness of applying GI standard, 4) farmers’ limited competency of marketing and market network, 5) limited ownership of farming tool and engine for processing coffee as standardized, 6) facilitator extension officer’s limited competency concerning coffee and GI standard, 7) MPIG-KRT institution not playing its part maximally, 8) farmer group’s limited management competency, 9) limited number of Product Processing Units as standardized, 10) synergy between related offices not established maximally.

The opportunities existing include: 1) rapid technology and information technology development, easy promotion and advertising in internet, 2) widely-opened coffee market potency, 3) coffee drinking trend as lifestyle, 4) consumers’ tastes shifting to the high-quality coffee, 5) the widely-opened opportunity of developing coffee agribusiness, 6) the widely-opened opportunity of exporting coffee, 7) the opportunity of cooperating with other parties like high education, research institution, program corporate responsibility, 8) the opened opportunity of publishing and marketing coffee.

Threats faced by Temanggung Regency are, among others: 1) coffee market competition, 2) many GI coffee products in other regions, 3) information technology misuse in coffee trading, 4) unfair game in coffee trading, and 5) the development of coffee agrotourism in other regency.

The result of internal (strengths and weaknesses) factor identification is analyzed using internal factor (IFE) matrix and external factor (opportunities and threats using external factor (EFE) matrix. The result of analysis shows that IFE matrix score is 3.1 and EFE matrix score is 3.8. It means that the strategic position of Temanggung Regency is to grow and to develop (to build) (David, 2006) [12]
3.2. Alternative Strategy

Alternative strategy in SWOT matrix consists of 4 types: S-O (strength-opportunity), W-O (weakness – opportunity), S-T (strength-threat) and W-T (weakness-threat) strategies. Alternative strategies are formulated from the combination and the integration of internal and external factor. S-O strategy is the one using internal strength to utilize external opportunity. W-O strategy is the one to minimize the weakness existing to utilize opportunities. S-T strategy is the one to optimize the internal strength in order to avoid threat. W-T strategy is a defensive strategy to minimize weakness and to avoid threat.

Table 1. SWOT matrix for alternative strategy of improving the farmers’ adoption to Temanggung Robusta Coffee’s Geographical Indication Standard (Source: Primary Data Analysis, 2019)

|                      | STRENGTHS (9 items)                                      | WEAKNESSES (10 items)                                      |
|----------------------|-----------------------------------------------------------|------------------------------------------------------------|
| **S-O STRATEGY**     |                                                           |                                                            |
| **OPPORTUNITIES**    |                                                           |                                                            |
| (8 items)            |                                                           |                                                            |
| 1.                    | Improving the attempt of branding Temanggung Robusta Coffee based on GI | 4. Improving the farmers and Extension officer’s competency of adopting Robusta Coffee’s GI standard |
| 2.                    | Improving the product development and market penetration for Temanggung Robusta Coffee | 5. Improving socialization and facilitation for the farmers related to robusta coffee’s GI standard. |
| 3.                    | Pilot project of Temanggung coffee agroedutourism          |                                                            |
| **THREATS**          |                                                           |                                                            |
| (5 items)            |                                                           |                                                            |
| 6.                    | Improving synergy between related offices and Bappeda in facilitating the farmers in applying Temanggung Robusta Coffee’s GI standard | 7. Improving the function and role of MPIG institution in escorting the GI standard of Robusta Coffee |
| **S-T STRATEGY**     |                                                           |                                                            |
|                      |                                                           |                                                            |
| **W-T STRATEGY**     |                                                           |                                                            |
|                      |                                                           |                                                            |

Table 1 shows that 8 (eight) alternative strategies to be implemented to improve the farmers’ adoption to Temanggung Robusta coffee’s GI standard. S-O Strategy contains 3 (three) alternative strategies, W-O strategy contains 2 (two) alternative strategies, S-T strategy contains 1 (one) alternative strategies, and W-T strategy consists of 2 (two) alternative strategies.

3.3. Strategy Priority

Strategy priority is the strategy that can be chosen to be implemented first (prioritized). The strategy priority is determined using Quantitative Strategic Planning Matrix (QSPM) analysis, by estimating TAS (Total Attractiveness Score) for each of strategies formulated in SWOT Analysis. TAS value is estimated from the importance (significance) of strengths, weaknesses, opportunities, and threats to each of alternative strategies.
Table 1. The Prioritized Strategy of Improving the farmers’ Adoption to Temanggung Robusta Coffee Geographical Indication Standard

| No  | Alternative Strategies                                                                 | TAS | Priority Ranking |
|-----|----------------------------------------------------------------------------------------|-----|-----------------|
| 1.  | Improving the attempt of branding Temanggung Robusta Coffee based on GI                 | 6,37| 6               |
| 2.  | Improving the product development and market penetration for Temanggung Robusta Coffee  | 6,42| 5               |
| 3.  | Pilot project of Temanggung coffee agroedutourism                                       | 6,13| 7               |
| 4.  | Improving the farmers and Extension officer’s competency of adopting Robusta Coffee’s GI standard | 7,84| 2               |
| 5.  | Improving socialization and facilitation for the farmers related to robusta coffee’s GI standard | 7,89| 1               |
| 6.  | improving synergy between related offices and Bappeda in facilitating the farmers in applying Temanggung Robusta Coffee’s GI standard | 5,96| 8               |
| 7.  | Improving the function and role of MPIG institution in escorting the GI standard of Robusta Coffee | 6,58| 3               |
| 8.  | Reinforcing the farmer group institution in applying GI Standard                          | 6,45| 4               |

Source: Primary Data Analysis, 2019

The first priority of the strategy of improving the farmers’ adoption to Temanggung Robusta Coffee’s GI Standard is the improvement of socialization and facilitation to the farmers related to Temanggung Robusta Coffee’s GI standard. This strategy is prioritized to accelerate the adoption of GI standard by coffee farmers. Socialization conducted intensively and involving the resources (informants) coming from related office, successful farmers through the application of GI standard as motivator, and inviting buyers potentially improves the farmers’ self-confidence in applying GI. In addition to socialization, continuous training and facilitation are very desirable to ascertain that the adoption of GI standard has been a new culture in robusta coffee cultivation and post-harvesting in Temanggung Regency. The implementation of such strategy is expected to create positive attitude among coffee farmers to the adoption of GI standard and it is in line with Linan and Chen (2016)[14], Fahrudin (2014)[15] and Setyowati et al (2019)[7] finding that the farmers’ positive attitude can improve the farmers’ intention to adopt GI standard.

4. Conclusion
The prioritized strategies of improving the farmers’ adoption to Temanggung Robusta Coffee’s GI Standard are to improve socialization and facilitation to the farmers related to robusta coffee GI standard by related institutions, to improve the farmers and the extension officer’s competency of adopting Robusta Coffee GI standard, and to improve the function and the role of MPIG institution in escorting Robusta Coffee’s GI standard.

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