

## **Evaluating The Marketing Strategy of Trigona Honey Through SWOT Analysis: A Case Study of Batu Ma'illong Forest Farmers Group**

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**Abstract:** Trigona honey is one of the non-timber forest products with high economic value and strong potential to be developed as a leading local commodity in Mamasa Regency. This study aims to analyze the marketing strategy of trigona honey produced by the Forest Farmer Group Batu Ma'illong in Taupe Village, Mamasa District, Mamasa Regency. The research employed a qualitative descriptive approach using SWOT analysis to identify internal and external factors affecting product marketing. The results showed that Forest Farmer Group Batu Ma'illong possesses several key strengths, including adequate production capacity, affordable product prices, the use of production technology, halal certification, and guaranteed product authenticity. However, the group still faces several challenges, particularly in marketing, capital, and cultivation skills. External factors indicate significant market opportunities due to increasing public interest in trigona honey, although business competition and economic conditions remain challenges. Based on the SWOT analysis, the business position falls within Quadrant I, indicating that an aggressive strategy should be implemented by leveraging strengths to seize market opportunities. Therefore, strengthening branding, expanding marketing networks, and utilizing digital media are recommended as the main strategies to enhance the competitiveness and sustainability of Forest Farmer Group Batu Ma'illong's trigona honey business.

**Keywords:** Marketing Strategy; Trigona Honey; SWOT Analysis; Batu Ma'illong; Forest Farmers Group

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### **INTRODUCTION**

Mamasa Regency, particularly Taupe Village in Mamasa District, has significant potential for Trigona bee cultivation. The Batu Ma'illong Forest Farmers Group, one of the Trigona bee farmers, has been working to develop honey production to improve the welfare of the local community. However, in practice, they still face various challenges in marketing their product.

Trigona honey faces various marketing challenges, ranging from low consumer awareness of its benefits to competition from cheaper conventional honey. Furthermore, limited distribution and market reach make it difficult for this product to enter supermarkets or e-commerce platforms. The lack of branding and promotional strategies further weakens its competitiveness, while production fluctuations due to natural factors lead to stock instability.

The lack of mentoring and access to digital marketing technology also hinders forest farmer groups from developing their businesses. Coupled with unstable prices due to unclear market regulations, these challenges mean that the marketing of trigona honey continues to face various obstacles that need to be addressed immediately.

To address these challenges, an appropriate marketing strategy is needed to increase the awareness of Trigona honey from the Batu Ma'illong Forest Farmers Group, increase its competitiveness, and provide greater economic benefits to the bee farming community in Taupe Village. Therefore, this study aims to analyze marketing strategies that can be implemented to increase Trigona honey sales and develop a more effective and sustainable marketing model for the Batu Ma'illong Forest Farmers Group.

Trigona honey is known to have high economic value and various health benefits, and has the potential to be developed as a source of income for rural communities (Karnia et al., 2019) (Saputra et al., 2023). Good cultivation management in forest farmer groups plays an important role in increasing the quality and selling value of honey (Umam et al., 2023).

Trigona honey is a stingless bee product that has high economic value and various health benefits (Saputra et al., 2023). Unlike conventional honey from *Apis Mellifera* bees, Trigona honey has a thinner texture, a distinctive sweet and sour taste, and a higher propolis content, resulting in greater health benefits. With these advantages, Trigona honey has significant market potential, both locally, nationally, and internationally. Bees are social insects with rich benefits, producing honey known for its health benefits (Mariani et al., 2022)

Trigona honey is increasingly gaining global attention due to its nutraceutical properties and added value as a functional food product, thus having the potential to become a superior commodity based on local resources (Vit et al., 2025).

In many rural communities, developing Trigona bee cultivation can be a sustainable source of income, but small and medium-sized enterprises often face marketing challenges, limited production capacity, and inadequate equipment. A recent study using a SWOT approach on Trigona honey businesses emphasized the need for synergy between increased production capacity and modern marketing strategies to expand market share (Jonson et al., 2024).

The development of e-commerce platforms and digital marketing strategies (including the use of social media platforms like TikTok and affiliate marketing platforms like Shopee) is opening up new opportunities for small-scale agribusinesses to reach a wider consumer base and address the instability of traditional marketing strategies. Research on e-commerce implementation in rural areas shows that integrating digital channels can improve market access and accelerate the penetration of agricultural products into urban and national consumer segments (Vavekanand & Kumar, 2024).

On the other hand, certification and quality attributes (e.g., 100% authentic honey, halal certification, hygienic production processes) have been shown to increase consumer purchase intention and loyalty to food products, thus becoming a key competitive advantage for local honey producers. Therefore, combining product excellence (authentic products, halal certification, vacuum processing) with a digital marketing strategy is a viable approach to pursue market growth (Hasanah et al., 2023).

Conceptually, SWOT analysis is chosen because of its ability to connect internal factors (strengths and weaknesses) with external factors (opportunities and threats) so as to guide the selection of appropriate strategies, for example the S-O strategy (utilizing strengths to seize opportunities) in quadrant I conditions. The marketing thinking framework used refers to the modern marketing concept which emphasizes the identification of market needs, the creation of

value propositions, and the use of effective distribution and promotion channels to capture value from customers (Hunger & Wheelen, 2014).

Based on this context and initial field findings (large production capacity, halal & 100% original products, use of vacuum machines; but facing weaknesses such as limited member expertise, capital, traditional marketing, and less strategic shop locations), this study aims to analyze the marketing strategy of trigona honey at Batu Ma'illong Forest Farmers Group using a descriptive qualitative approach with SWOT analysis, as well as recommending adaptive and digital-based marketing strategies to increase market penetration and business sustainability (Jonson et al., 2024).

Previous research (Jonson et al., 2024; (Larasati et al., 2025) has shown that applying a SWOT analysis can serve as a strategic basis for determining the direction of development for small businesses based on local resources. However, studies integrating the SWOT approach with a digital entrepreneurship perspective in the Trigona honey sector are still limited. Therefore, this research is crucial in providing a marketing strategy development model that focuses not only on increasing sales but also on digital transformation and business sustainability.

Numerous previous studies have examined the development of trigona honey businesses using SWOT analysis approaches. However, these studies have generally focused on cultivation practices, product quality, and general business feasibility analysis. Research integrating SWOT analysis with a digital entrepreneurship perspective in marketing strategy development remains relatively limited, particularly in the context of forest farmer groups in rural areas. In addition, previous studies have not extensively explored how product excellence attributes, such as halal certification, honey authenticity, and the use of modern production technology, can be optimized as part of digital branding strategies to enhance market competitiveness. Meanwhile, the rapid development of digital technology and shifts in consumer behavior have created new opportunities for community-based local enterprises to expand their market reach more effectively and sustainably. Based on these conditions, this study offers novelty through the development of a SWOT-based marketing strategy integrated with a digital entrepreneurship approach to strengthen competitiveness, expand market access, and support business sustainability for the Batu Ma'illong Forest Farmer Group in Mamasa Regency.

## **METHOD**

This study uses a qualitative approach with a descriptive type of research. This approach aims to obtain an in-depth overview of the Trigona honey marketing strategy implemented by the Ma'illong Stone Forest Farmers Group. Qualitative research was chosen because it can reveal facts and social phenomena contextually through the perspectives of Trigona honey entrepreneurs, and analyze them using the SWOT (Strengths, Weaknesses, Opportunities, Threats) framework to formulate an appropriate marketing development strategy.

The research was conducted in Taupe Village, Mamasa District, Mamasa Regency, West Sulawesi Province, known as one of the Trigona honey production centers in the region. This location was chosen purposively because the Batu Ma'illong Forest Farmer Group (FFG Batu Ma'illong) is a forest farmer group active in honey production and marketing. The research was conducted from July to August 2024 and included observation, interviews, and group discussions.

The research subjects included members of the Batu Ma'illong Forest Farmers Group, group administrators, consumers, local business owners, and representatives of the supporting

agency (Forestry Service). Ten key informants were selected using purposive sampling, taking into account their experience, direct involvement, and understanding of Trigona honey production and marketing activities.

Data were collected through several techniques, namely in-depth interviews, questionnaires, field observations, documentation, and Focus Group Discussions (FGD). In-depth interviews were conducted using semi-structured interview guidelines to obtain information regarding the strengths, weaknesses, opportunities, and threats in the marketing of Trigona honey. Furthermore, the questionnaire was designed using a four-point Likert scale, ranging from 1 (very uninfluential) to 4 (very influential), with the aim of measuring the importance and influence of each factor on the marketing strategy of Trigona honey in a more measurable and objective manner.

In addition, field observations were carried out through direct observation of cultivation activities, production processes such as honey harvesting and packaging, as well as the marketing system implemented by the Batu Ma'illong Forest Farmers Group. Documentation techniques were also employed by collecting various relevant documents and archives, including production records, halal certificates, activity photographs, product labels, as well as sales data and group activity reports. To strengthen the validity of the data, this study also conducted Focus Group Discussions (FGD) to validate the interview results and determine strategic priorities through consensus among group members.

The data were analyzed using the SWOT (Strengths, Weaknesses, Opportunities, and Threats) analysis method to formulate an appropriate marketing strategy for the Batu Ma'illong Forest Farmer Group. The analysis procedure was carried out through several stages. The first stage involved identifying internal and external factors based on interview and questionnaire results. Internal factors consisting of strengths and weaknesses, as well as external factors in the form of opportunities and threats, were identified through in-depth interviews, field observations, documentation, and questionnaire distribution to research informants. The identification process was conducted using data reduction techniques and theme categorization based on the frequency of occurrence, relevance, and the influence of each factor on the development of Trigona honey marketing.

After the strategic factors had been identified, the next stage involved constructing the IFAS (Internal Factor Analysis Summary) and EFAS (External Factor Analysis Summary) matrices. Each strategic factor was assigned a weight and rating to determine its level of influence on the marketing strategy of the Trigona honey business. Weights were used to indicate the relative importance of each strategic factor to the success of Trigona honey marketing. The weight values ranged from 0.00 to 1.00, with a cumulative total of 1.00. The weighting process was based on the assessments of 10 key informants consisting of forest farmer group administrators, group members, consumers, local business actors, and facilitators from related institutions. The assessment process employed a four-point Likert scale, and the results were averaged to obtain the final weight of each strategic factor. Meanwhile, ratings were assigned to describe the condition or level of influence of each factor on the strategic position of the business. For internal factors, the rating criteria were defined as follows: 4 = very strong, 3 = strong, 2 = weak, and 1 = very weak. For external factors, the ratings were categorized as follows: 4 = very significant opportunity or threat, 3 = significant opportunity or threat, 2 = moderate opportunity or threat, and 1 = low opportunity or threat. The rating process was conducted through discussions between the researchers and key informants based on field data

interpretation, the intensity of each factor's influence, and its level of urgency for business development.

After the weighting and rating process was completed, the next stage involved calculating the score for each factor. The score was obtained by multiplying the weight and rating assigned to each indicator. Furthermore, the total scores in the IFAS and EFAS matrices were used to determine the strategic position of the Batu Ma'illong Forest Farmer Group within the SWOT Cartesian Diagram. The following stage involved determining the strategic position of the organization by calculating the difference between the total strength and weakness scores on the X-axis, as well as the difference between the total opportunity and threat scores on the Y-axis. The results of these calculations were then mapped into the SWOT Cartesian Diagram to identify the organization's strategic quadrant position.

After determining the quadrant position, alternative SWOT strategies were formulated based on the identified strategic position. The strategic alternatives were developed using SWOT matrix combinations, including S-O, W-O, S-T, and W-T strategies. The resulting strategies focused on strengthening digital marketing, increasing production capacity, developing halal product branding, and expanding marketing networks. The proposed strategies were subsequently validated through a Focus Group Discussion (FGD) to enhance the credibility of the analysis results. This process involved forest farmer group administrators, group members, consumers, and facilitators from related institutions. The FGD aimed to clarify the suitability of SWOT factors with actual field conditions, examine the relevance of the assigned weights and ratings, determine the most realistic and applicable strategic priorities, and achieve consensus regarding the main strategy for the development of the Trigona honey business.

The validity of the data was tested using triangulation methods, including source triangulation by comparing information obtained from administrators, group members, and consumers; technical triangulation by combining interviews, observations, documentation, and Focus Group Discussions (FGD); as well as time triangulation by checking the consistency of data collected at different times.

## **RESULTS AND DISCUSSION**

### **Research Results**

#### **Identification of Internal and External Factors**

In terms of internal factors, this study identified both strengths and weaknesses that influence the business development and marketing strategy of Trigona honey in the Batu Ma'illong Forest Farmer Group. Based on the research findings, the Batu Ma'illong Forest Farmer Group possesses several strengths that can serve as the primary foundation for developing the marketing of Trigona honey. The group is supported by adequate human resources and sustainable raw material availability, enabling it to maintain large-scale production capacity. Honey production during the rainy season can reach approximately 50 liters per month, while during the dry season it increases to around 100 liters per month. The increase in production during the dry season is influenced by the more optimal activity of Trigona bees due to the greater availability of pollen.

Furthermore, the Trigona honey products have a broad market reach because they are available in various packaging sizes and price variations adjusted to the economic capacity of consumers. The products are marketed in 80 ml packaging priced at IDR 15,000, 250 ml at IDR 50,000, 1 liter at IDR 200,000, and 5 liters at IDR 1,000,000. These variations enable the products to reach different consumer segments, ranging from the general public to large-scale

buyers. In the production aspect, the Batu Ma'illong Forest Farmer Group has also utilized vacuum machine technology for the honey harvesting process. The use of this technology makes the honey extraction process more efficient, hygienic, and capable of maintaining the natural quality of Trigona honey. Another strength lies in the fact that the honey products have obtained halal certification with registration number ID76110013975961123, thereby increasing consumer credibility and trust, especially among markets concerned with halal product assurance. In addition, the honey marketed is 100% pure honey without any mixture and has high durability as long as the packaging remains tightly sealed. The authenticity of the product has become one of the main selling points that strengthens the position of the Batu Ma'illong Forest Farmer Group in both local and regional honey markets.

On the other hand, the study also identified several factors that constitute weaknesses in the production and marketing activities of Trigona honey. One of the main constraints is that some group members still lack optimal skills in Trigona bee cultivation, particularly in the technique of installing toping or bee nest containers. These technical skill limitations affect the productivity of bee colonies and the quality of the honey produced. In addition, limited business capital has become a significant obstacle in expanding production capacity. This condition has resulted in supporting facilities, such as harvesting equipment, storage facilities, and training tools, not being adequately fulfilled.

From the marketing perspective, promotional and distribution strategies are still carried out conventionally by relying on direct sales within the surrounding community. As a result, sales levels remain unstable and market reach has not expanded significantly because digital marketing platforms (e-commerce) have not yet been utilized as media for promotion and transactions. Another weakness is the limited number of vacuum machines, which prevents the production process from being carried out efficiently and simultaneously on a large scale. This condition affects production speed and the availability of honey stock in the market. In addition, the location of the sales outlet is not yet representative and lacks a strategic position, which hinders product visibility among consumers. Limited access to marketing locations has caused the sales potential, especially from consumers outside the region, to remain underutilized.

In terms of external factors, this study identified both opportunities and threats that influence the sustainability and development of the Trigona honey business in the Batu Ma'illong Forest Farmer Group. Based on interviews with group members and observations of the local honey market dynamics in Mamasa Regency, several strategic opportunities were identified that could be utilized to expand market reach and enhance the competitiveness of Trigona honey products. One of the main opportunities lies in the increasing public awareness of the health benefits of Trigona honey. Trigona honey is known to contain higher antioxidant, antibacterial, and anti-inflammatory properties compared to Apis bee honey, making it increasingly consumed as a natural supplement to maintain body immunity. The growing healthy lifestyle trend following the COVID-19 pandemic has also strengthened the demand for natural products, including Trigona honey. This condition provides a significant opportunity for the Batu Ma'illong Forest Farmer Group to position its product as part of the modern community's health needs.

Another opportunity arises from the condition of Trigona bee cultivation in Mamasa Regency, where most beekeepers still use conventional methods. This situation creates a strategic advantage for the Batu Ma'illong Forest Farmer Group, which has begun adopting modern technology, such as the use of vacuum machines in the honey harvesting process. Through the implementation of this technology, the group has the opportunity to become a

pioneer of innovation in Trigona bee cultivation in the Mamasa region by developing a production system that is more efficient and hygienic than that of local competitors. In addition, many local honey producers still do not possess halal certification, even though product legality and halal assurance are important considerations for Indonesian consumers. The halal certification obtained by the Batu Ma'illong Forest Farmer Group strengthens the competitive position of the product and opens opportunities to reach broader market segments, particularly Muslim consumers who prioritize halal product assurance.

The Trigona honey products of the Batu Ma'illong Forest Farmer Group have also received positive acceptance from the community because they are processed in a more sterile and hygienic manner compared to similar products that are still traditionally processed. The image of a clean, healthy, and natural product becomes an added value that can strengthen consumers' perceptions of quality while supporting promotional activities. Furthermore, Trigona honey has a broad market share, not only as a health product but also as an ingredient in culinary and beauty products. Honey is often used as a mixture for herbal drinks, natural supplements, food ingredients, and body care products. This diversification of product functions opens considerable opportunities for market expansion at both local and regional levels. Overall, these opportunities indicate that the Batu Ma'illong Forest Farmer Group has strong prospects for developing innovative and market-oriented marketing strategies, particularly through the utilization of product quality, halal certification, and production technology implementation.

On the other hand, this study also identified several external factors that potentially threaten the sustainability of the Trigona honey business in the Batu Ma'illong Forest Farmer Group. The primary threat comes from the increasing number of competitors selling similar Trigona honey products in Mamasa Regency. Competition arises not only from local business actors but also from individuals and small-scale beekeeper groups who have begun recognizing the economic potential of Trigona bee cultivation. The growing number of sellers has made the market increasingly competitive, requiring the Batu Ma'illong Forest Farmer Group to strengthen product quality, brand image, and more innovative marketing strategies in order to maintain its market share.

In addition, the increasing public interest in cultivating Trigona bees may lead to market saturation if the number of producers continues to grow without being accompanied by product diversification and effective distribution strategies. This condition requires the Batu Ma'illong Forest Farmer Group to continue innovating, for example through the development of derivative honey products such as honey soap, natural face masks, or honey-based health drinks. From a macroeconomic perspective, the financial condition of Mamasa Regency, which is experiencing a budget deficit, also indirectly affects the purchasing power of the community. Declining economic activity and weakening local consumer purchasing power may become challenges to the sustainability of Trigona honey sales. Therefore, the Batu Ma'illong Forest Farmer Group needs to expand its marketing network beyond the Mamasa region in order to maintain stable sales.

Environmental factors also pose serious threats because unpredictable weather changes affect the productivity of Trigona bees. Prolonged rainy seasons can hinder bee activity in collecting nectar, while extreme temperatures during the dry season can reduce the availability of natural food sources. These weather fluctuations directly impact honey production, both in terms of volume and quality. Therefore, adaptive capacity is needed through better colony management and the implementation of cultivation systems that are more resilient to climate change. Overall, these threats indicate that the sustainability of the Trigona honey business in

the Batu Ma'illong Forest Farmer Group is influenced not only by the group's internal capabilities but also by complex external dynamics, including business competition, economic conditions, and ecological factors. Thus, strengthening resource capacity, product innovation, and the expansion of marketing networks are important strategic measures to maintain business sustainability amid the continuously evolving business environment.

### IFAZ and EFAZ Matrix

The Internal Factor Analysis Summary (IFAZ) Matrix is a strategic analysis tool used to evaluate the internal condition of an organization or business group based on the identification of strengths and weaknesses. This matrix is compiled after all internal factors have been weighted, rated, and scored through research data processing.

Through the IFAS matrix, researchers can obtain a comprehensive overview of the Batu Ma'illong Forest Farmers Group's internal potential and capacity, including human resources, production capacity, supporting facilities, and marketing system effectiveness. This analysis helps identify the extent to which internal strengths can be leveraged to support business development and uncovers weaknesses that need to be minimized to prevent them from hindering organizational performance.

The IFAS calculation results are then presented in a Cartesian diagram of internal position, showing the relationship between the total strengths and weaknesses. This diagram is used to determine the strategic position of the Batu Ma'illong Forest Farmers Group in terms of its internal preparedness to face external environmental opportunities and threats. Thus, the IFAS analysis provides a strong empirical basis for formulating a more competitive and sustainable Trigona honey business development strategy in Taupe Village, Mamasa District.

**Table 1.** IFAZ Matrix for Batu Maillong Forest Farmer Group

Internal Strategy Factors	Weight	Rating	Score
<b>Strength</b>			
1. Large production capacity.	0.13	4	0.49
2. The products offered can be reached by all groups of society.	0.12	3	0.41
3. In producing honey, the Batu Ma'illong Forest Farmers Group has used a vacuum machine.	0,12	4	0.41
4. The products offered are halal certified.	0.14	4	0.51
5. The product offered is 100% pure honey.	0.15	4	0.57
<b>Total</b>			<b>2.38</b>
<b>Weakness</b>			
1. Some members of the Forest Farmers Group are not yet experts in cultivating trigona bees.	0.05	1	0.07
2. Limited capital to start developing a trigona bee cultivation business.	0.08	2	0.17
3. Marketing is not yet stable because it still uses a conventional marketing system.	0.07	2	0.12
4. The lack of vacuum machines that support more efficient production.	0.06	2	0.10
5. The shop location is not representative and not strategic	0.07	2	0.15
<b>Total</b>	<b>1.00</b>		<b>0.61</b>
<b>Difference</b>			<b>1.78</b>

Based on the analysis results of the IFAS matrix, the total score for the strength factor was 2.38, while the total score for the weakness factor was 0.61. To determine the basic value of the internal position policy, the difference between the strength and weakness scores was calculated by subtracting the weakness score from the strength score. Based on these results, the difference value was 1.78, which reflects the strategic position of the Batu Ma'illong Forest Farmers Group's internal factors. This value serves as the main reference in determining organizational development policies and strategies, because it indicates the extent to which internal strengths are able to balance and overcome existing weaknesses.

The External Factor Analysis Summary (EFAS) matrix is a strategic analysis tool used to assess and interpret external conditions that influence the performance of an organization or business group. This matrix is compiled based on data processing of opportunity and threat factors, which have been weighted, rated, and scored according to their level of influence on business continuity.

Through the preparation of the EFAS matrix, researchers can understand the extent to which the external environment has a positive or negative impact on the development of the Trigona honey business in the Batu Ma'illong Forest Farmers Group. These external factors include market, social, economic, technological, and climatic conditions that have the potential to affect the production and distribution process. Thus, the EFAS analysis plays an important role in identifying opportunities that can be optimally utilized, while anticipating threats that might hinder business sustainability. Through the preparation of the EFAS matrix, researchers can understand the extent to which the external environment has a positive or negative impact on the development of the Trigona honey business in the Batu Ma'illong Forest Farmers Group. These external factors include market, social, economic, technological, and climatic conditions that have the potential to affect the production and distribution process. Thus, the EFAS analysis plays an important role in identifying opportunities that can be optimally utilized, while anticipating threats that might hinder business sustainability.

The EFAS calculation results are then visualized in a Cartesian Diagram of the external position, which illustrates the balance between the strength of opportunities and the magnitude of threats faced by the Batu Ma'illong Forest Farmers Group. This diagram serves as the basis for determining adaptive strategies relevant to the external business environment, so that the Batu Ma'illong Forest Farmers Group is able to maintain its competitiveness and expand the market share of Trigona honey products sustainably.

**Table 2.** EFAZ Matrix for Batu Maillong Forest Farmer Group

External Strategy Factors	Weight	Rating	Score
<b>Opportunity</b>			
1. Trigona honey has many health benefits.	0,14	4	0,49
2. Management of trigona bee honey in Mamasa, 80% still uses conventional methods.	0,14	3	0,46
3. The products offered are quite popular with the public because the products are more sterile.	0,14	4	0,52
4. Many competitors sell honey but it is not yet halal certified.	0,12	3	0,38
5. Trigona honey has a wide market share.	0,14	4	0,49
<b>Total</b>			<b>2,38</b>
<b>Threat</b>			
1. There are competing sellers selling the same product.	0,07	2	0,12

2. Increasing public interest in cultivating trigona bees.	0,06	2	0,10
3. The financial condition of Mamasa Regency is experiencing a budget deficit of approximately IDR 200 billion, which has an impact on people's purchasing power.	0,06	1	0,08
4. Lack of availability of production tools in the region.	0,06	2	0,09
5. Changing weather affects honey production.	0,07	2	0,12
<b>Total</b>	<b>1,00</b>		<b>0,50</b>
<b>Difference</b>			<b>1,84</b>

Based on the analysis results of the EFAS matrix, the total score for the opportunity factor was 2.35, while the total score for the threat factor was 0.50. To determine the baseline value of the external position analysis policy, the difference between the two factors was calculated by subtracting the threat score from the opportunity score. Based on the calculation results, the difference value was 1.84. This value is an important indicator in determining strategic policies, because it reflects the level of ability of the Batu Ma'illong forest farmers group to utilize external opportunities and anticipate various threats that could affect the sustainability of the Trigona honey business.

### Cartesian SWOT diagram



Figure 1. Cartesian Diagram of SWOT Analysis of Batu Ma'illong Forest Farmers Group.

Based on the analysis results displayed in Table 1, the difference between the strengths and weaknesses is 1.78. Meanwhile, from Table 2, it is known that the difference between the opportunities and threats is 1.84. These two difference values are then combined to form a strategic position analysis formula in the SWOT Cartesian Diagram. In the diagram, the value of 1.78 represents the position of internal factors on the X-axis, while the value of 1.84 represents external factors on the Y-axis. The results of this visualization provide a comprehensive picture of the strategic position of the Batu Ma'illong Forest Farmers Group in the context of its internal capabilities and the dynamics of the external environment it faces.

Based on the results of the SWOT analysis mapped through the Cartesian Diagram, the position of Batu Ma'illong Forest Farmers Group falls within Quadrant I, indicating the most strategic condition as it combines internal strengths with external opportunities. This position reflects that the farmer group has significant potential to implement an aggressive (growth-oriented) strategy, in which its strengths can be maximized to expand market reach, enhance product image, and strengthen the competitiveness of the Trigona honey business.

An aggressive strategy is considered the most appropriate approach because Batu Ma'illong Forest Farmer Group is not in a defensive position or experiencing internal organizational crisis. Instead, the group possesses several major strengths, including high production capacity, halal certification, and strong product quality, while the market demand for natural honey products continues to grow. These conditions indicate that the organization has sufficient internal readiness to pursue a more progressive market expansion through marketing digitalization and strengthened product branding.

These results are consistent with the findings (Sumarni, 2022) which indicate that an organization's position in Quadrant I of the SWOT analysis reflects the institution's readiness to expand its market by optimizing internal strengths to capitalize on available external opportunities. In line with this (Larasati et al., 2025) emphasize that aggressive strategies are effectively implemented to strengthen competitiveness and expand marketing networks, particularly when supported by digital innovations such as the use of e-commerce and social media-based promotion. leveraging local resources, community-based marketing, and digital integration can enhance competitiveness and sustainability for rural SMEs (Haris, 2024)

In addition, within the agribusiness context, the application of the Strength–Opportunity (S–O) strategy enables local organizations to optimize their resource strengths and transform market opportunities into sustainable competitive advantages (Nuraida et al., 2023). Therefore, Batu Ma'illong Forest Farmers Group needs to direct its development focus toward enhancing production capacity, strengthening distribution systems, and optimizing digital marketing strategies oriented toward business growth and sustainability.

Although digital marketing offers significant opportunities, its implementation still faces several practical challenges, such as the low level of digital literacy among group members, limited internet access in rural areas, and insufficient skills in creating engaging marketing content. In addition, competition within marketplace platforms is relatively intense, requiring the Batu Ma'illong Forest Farmer Group to establish strong product differentiation in order to compete effectively with other honey producers that have already entered the digital market.

### **SWOT Matrix**

The SWOT matrix is one of the strategic analysis tools used to formulate various alternative steps for organizational or corporate development. Through this matrix, four possible main strategy formulations can be identified, derived from the combination of internal and external factors, namely: SO (Strength–Opportunity) strategies, ST (Strength–Threat) strategies, WO (Weakness–Opportunity) strategies, and WT (Weakness–Threat) strategies. These four strategies serve as the basis for determining policy directions and development priorities that are most aligned with the organization's conditions. The results of the analysis of these factor combinations are presented in the form of the following SWOT matrix table.

Four main alternative strategies were identified that can be implemented by the Batu Ma'illong Forest Farmer Group to develop and strengthen the competitiveness of the Trigona honey business. The first strategy is the Strength–Opportunity (S–O) strategy, which focuses on utilizing internal strengths to take advantage of existing external opportunities. This strategy

can be implemented by conducting marketing activities more intensively through the expansion of cooperation networks with companies outside the region, as well as by utilizing e-commerce platforms and social media for promotional and sales activities, including endorsements, TikTok Affiliate, and Shopee Affiliate programs. In addition, branding can be strengthened by emphasizing halal certification, product authenticity, and the health benefits of Trigona honey as the main competitive advantages of the product.

The second strategy is the Strength–Threat (S–T) strategy, which emphasizes the use of internal strengths to anticipate and minimize the impact of external threats. This strategy can be carried out by developing product innovations through the introduction of unique, attractive, and market-relevant Trigona honey product variations while maintaining affordability for all levels of society. Furthermore, technology-based production processes, such as the use of vacuum machines, should be maintained and continuously improved as a form of product differentiation amid increasingly competitive market conditions.

The third strategy is the Weakness–Opportunity (W–O) strategy, which aims to reduce internal weaknesses by utilizing available external opportunities. Strategic efforts that can be undertaken include providing technical training for group members who are not yet proficient in Trigona bee cultivation, particularly in the technique of installing hive topping. In addition, supporting production facilities need to be improved, especially through the procurement of additional vacuum machines to increase work efficiency. Another important step is determining a more representative and strategic marketing location or sales outlet that is easily accessible to consumers in order to enhance product visibility and expand market reach.

The fourth strategy is the Weakness–Threat (W–T) strategy, which focuses on defensive efforts to minimize weaknesses while simultaneously addressing external threats. This strategy can be implemented by improving members' capabilities in marketing through training and seminars related to effective sales strategies. Financial conditions can also be strengthened by seeking alternative funding sources, such as sponsorships, grants, or cross-sector partnerships. In addition, the use of facilities and production equipment, particularly vacuum machines, should be optimized efficiently and sustainably in order to maintain production stability amid market competition and environmental challenges.

## **Discussion**

Based on the research findings, an aggressive strategy is considered the most appropriate approach because the Batu Ma'illong Forest Farmer Group possesses strong internal capabilities while simultaneously facing substantial external market opportunities. According to the SWOT analysis results, the organization is positioned in Quadrant I (Strength–Opportunity), indicating that the group has the capacity to utilize its internal strengths in order to maximize market opportunities. An aggressive strategy is regarded as relevant because the organization is neither in a defensive position nor experiencing an internal crisis that would require a defensive strategy. Instead, Batu Ma'illong Forest Farmer Group demonstrates sufficient internal readiness to pursue progressive market expansion through strengthened branding, broader distribution networks, and the utilization of digital marketing platforms such as e-commerce and social media. This strategy enables the group to expand market reach, increase sales volume, and strengthen the market position of Trigona honey products at both local and regional levels. In the context of strategy formulation, the application of the SWOT matrix, particularly the Quadrant I (Strength–Opportunity) position, reflects an aggressive strategic posture that emphasizes leveraging internal strengths to capitalize on external

opportunities, such as strengthening product image and expanding digital market penetration (Poniwatie et al., 2022). Furthermore, the role of e-commerce platforms not only broadens market access but also introduces new challenges related to digital literacy and infrastructure readiness. Therefore, the implementation of digital strategies must be carried out in an adaptive and sustainable manner (Morepje et al., 2024).

From an entrepreneurship perspective, the research findings indicate that digital transformation has become an important factor in expanding market access for local products. Conventional marketing strategies that rely solely on direct interaction are no longer sufficient to enhance the competitiveness of small enterprises such as the Batu Ma'illong Forest Farmer Group. Innovative strategic marketing practices, including digital marketing, personalization, customer engagement, data analytics, and strategic partnerships, can promote business development and strengthen the competitiveness of small enterprises (Urefe et al., 2024). By utilizing e-commerce platforms, the Batu Ma'illong Forest Farmer Group has greater opportunities to develop its business through more efficient promotion and broader consumer reach. Modern marketing strategies, including market segmentation, target market determination, and market positioning, can improve the competitiveness of MSMEs (Alpiana et al., 2024). Marketing communication strategies are also able to strengthen MSME competitiveness in the digital era by effectively promoting products and brands (Rusdana et al., 2022). In addition, strengthening product image through halal branding, hygienic quality, and guarantees of honey authenticity serves as important social capital in building consumer trust toward the Batu Ma'illong Forest Farmer Group.

The success of agribusiness marketing in the digital era depends on building consumer trust through product quality, sustainability practices, and transparency, while simultaneously addressing challenges related to technology access and data protection (Waluyo, 2023). The Batu Ma'illong Forest Farmer Group possesses adequate human resource capacity and is supported by a relatively stable availability of raw materials, enabling the group to maintain Trigona honey production at approximately 50–100 liters per month. This condition indicates that the group has sufficiently strong internal capacity to meet market demand in a sustainable manner. From the perspective of agribusiness entrepreneurship, production stability plays an important role in building consumer trust and maintaining product distribution continuity, particularly within digital markets where consistent stock availability is considered one of the key indicators of successful online marketing.

From the perspective of entrepreneurial orientation, the ability of the Batu Ma'illong Forest Farmer Group to adopt digital marketing technology reflects the dimensions of innovativeness and proactiveness, namely the organization's capacity to adapt to market changes and capitalize on emerging business opportunities. The digital-based marketing transformation implemented by the Batu Ma'illong Forest Farmer Group functions not only as a promotional strategy, but also as a form of entrepreneurial adaptation to changing consumer behavior in the digital economy era. Digital transformation enhances customer bases, flexibility, and business process acceleration, while also offering innovative opportunities for business development (Radzikhovska, 2021).

From an economic perspective, the implementation of digital marketing strategies in local agribusiness sectors, such as the Trigona honey business, has significant potential to improve the welfare and sustainability of rural communities. The use of digital marketing can increase farmers' income by expanding market reach and improving distribution efficiency, allowing products to be marketed beyond local areas to broader regional and national markets.

Through digital platforms, producers are also able to reduce marketing limitations and transaction costs while increasing direct interaction with consumers.

In addition, digital marketing strategies can encourage innovation in rural entrepreneurship by creating opportunities for product diversification and cross-sector collaboration. Trigona honey products can be developed into various derivative products, such as health supplements, herbal beverages, beauty products, and processed food items, thereby increasing product value and market attractiveness. Collaboration with other sectors, including tourism, culinary industries, and digital creative industries, can further strengthen business development and open new economic opportunities for rural communities.

Furthermore, the implementation of digital marketing contributes to strengthening local economic resilience by positioning Trigona honey as an icon of sustainable natural resource-based enterprises. The integration of local resources with modern marketing systems not only enhances product competitiveness but also supports the development of environmentally sustainable community-based businesses. As a result, the Trigona honey business can become an important driver of local economic growth while preserving the ecological and socio-economic sustainability of rural areas.

These findings are consistent with the study conducted by Li et al., which demonstrates that e-commerce adoption significantly increases farmers' income and expands market access for agricultural products (Li et al., 2024). Digitalization through e-commerce platforms is capable of integrating the Batu Ma'illong Forest Farmer Group into modern supply chains and creating broader opportunities for market expansion. Furthermore, the implementation of e-commerce also strengthens farmers' business networks and promotes the growth of agrarian entrepreneurship, as digital interactions expand collaborative opportunities and enhance the innovative capacity of agricultural sector actors (Song et al., 2024).

The development of digitally-based Trigona honey businesses by the Batu Ma'illong Forest Farmer Group has important implications for rural economic development, as it can increase the added value of local commodities, create new employment opportunities, and strengthen community economic capacity based on natural resources. Marketing digitalization enables rural products to move beyond local markets and become integrated into regional and national market networks. Digital technology transforms peri-urban agriculture by enhancing its value-added role and promoting urban-rural integration and sustainable development (Lei et al., 2025). Digital marketing strategies centered on social media, e-commerce, and integrated branding have also been proven to significantly improve market reach and sales in the agricultural sectors of Indonesia and Ukraine, with income increases reaching up to 82% (Relawati et al., 2025).

The findings of this study support previous research (Larasati et al., 2025), which stated that aggressive strategies are effectively implemented in local resource-based MSMEs that possess strong product advantages and substantial market opportunities. However, this study offers a new contribution by demonstrating that the integration of SWOT strategies with a digital entrepreneurship approach can serve as a more adaptive strategy for Trigona honey marketing in rural areas.

## **CONCLUSIONS**

This study reveals that the marketing strategy of Trigona honey at Batu Ma'illong Forest Farmers Group is positioned in Quadrant I (aggressive strategy) of the SWOT matrix. This condition reflects the group's ability to leverage internal strengths such as production capacity, product authenticity, and halal certification to capture external opportunities, including increasing market demand, the growth of e-commerce, and rising public awareness of natural products.

The main findings emphasize that digital transformation and adaptive entrepreneurship are key factors in strengthening the competitiveness of local agribusiness products. Through the utilization of digital platforms, the group has been able to expand its marketing network, improve distribution efficiency, and build a credible brand image. The implementation of digital marketing-based strategies not only increases sales but also transforms the business orientation toward greater innovation and sustainability.

From an economic perspective, this study provides several important implications for business development, policy formulation, and academic advancement. Practically, the findings indicate that small-scale enterprises in the honey sector have the opportunity to increase their income by integrating digital marketing strategies and strengthening brand identity based on product authenticity. The utilization of digital platforms enables producers to expand market reach, improve promotional effectiveness, and build stronger consumer trust through the promotion of authentic, halal-certified, and high-quality Trigona honey products. As a result, local honey enterprises can become more competitive in both local and broader markets.

From a policy perspective, the study highlights the important role of local governments and supporting institutions in strengthening rural-based enterprises. Government support is needed in the form of digital marketing training, easier access to business capital, and facilitation of halal certification for small businesses in rural areas. Such support can help improve the managerial and technological capacities of local entrepreneurs while encouraging the development of more sustainable and competitive rural economic activities. In addition, the provision of infrastructure and digital literacy programs can accelerate the transformation of traditional agribusinesses into modern market-oriented enterprises.

Academically, this study contributes empirical evidence demonstrating that the SWOT analysis model is effective when applied in the context of local resource-based entrepreneurship and rural economic digitalization. The findings enrich the literature on rural entrepreneurship by showing how strategic analysis can be integrated with digital marketing approaches to strengthen the competitiveness of small-scale agribusinesses. Furthermore, this study opens opportunities for future research to deepen the analysis by integrating quantitative approaches, such as the Analytical Hierarchy Process (AHP) or strategic mapping methods, in order to evaluate and prioritize strategies that have the most significant impact on the growth and sustainability of Trigona honey enterprises.

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