Analysis of ginger marketing strategy in Karanganyar Regency, Indonesia

Setyowati* and F Widadie

Department of Agribusiness, Sebelas Maret University, Jl. Ir. Sutami 36 A, Keningan, Surakarta, 57126, Indonesia
*Corresponding author: watikchrism@yahoo.com

Abstract. This study aims to analyze marketing strategies for ginger farmers, identify and analyze the external and internal environments that affect the marketing of ginger and formulate marketing strategies for the development of ginger marketing in Karanganyar Regency. Ginger is one of the plants that can only grow in the tropics. Ginger rhizomes, especially those harvested at a young age do not last long are stored in warehouses. For these reasons, the processing is needed as soon as possible so it remains fit for consumption. To get quality ginger rhizomes, ginger is harvested at the age of not too young nor too old. The analysis used the SWOT matrix, IE Matrix, and QSP Matrix. An analysis of the external and internal environment used IFE and EFE matrix. In this research, alternative strategies that can be applied in marketing ginger in Karanganyar Regency are: 1) SO Strategy: maintaining quality and increasing quantity of ginger, optimizing farmer institution to build partnership with supplier and consumer, 2) WO strategy: improving knowledge and skills and generate interest in the cultivation of ginger, provision of adequate facilities and infrastructure for the continuity and smoothness of production activities, 3) ST strategy: expanding the network marketing and approach to consumers, maintaining consumer confidence with quality and continuity of products, 4) WT Strategy: improving the efficiency of ginger distribution, increasing the adoption rate of farmers technology in ginger cultivation. The result of QSP matrix analysis showed the strategy that can be applied is to improving the quality of producer human resources through the optimization of the role of the related offices to improve the knowledge and skills and increasing the interest to the cultivation of ginger.

1. Introduction
Ginger (Zingiber officinale Rosc) is one of the herbs and medicinal plants that have prospects in regional and international markets. Ginger can be used as a beverage, cooking spice, flavoring and aroma of biscuits, candy, confectionery and also used in the drug industry, perfume and traditional herbal medicine [1]. With the development of domestic herbal medicine, companies have even exported to foreign countries, so the opportunity to develop ginger is very open [2]. The world demand for ginger products continues to increase along with the development of the food and beverage industry in the country that made from raw ginger. The export value of ginger in 2011–2014 always increased, in the period of January–June 2014 ginger became the main product of export of herbal medicine with an export share of 88.58% of the total export of herbal medicine Indonesia [3]. According to the declaration of the National Export Development Agency program, ginger is one of the priority commodities among four other commodities namely vanilla, cashew, vetiver and patchouli [4].
Ginger is one of the plants that can only grow in the tropics. Planting can only be done in equatorial regions such as Southeast Asia, one of which is Indonesia. Ginger rhizomes, especially those harvested at a young age do not last long are stored in warehouses. For these reasons, the processing is needed as soon as possible so it remains fit for consumption. To get quality ginger rhizomes, ginger is harvested at the age of not too young nor too old. Fresh ginger is marketed in the form of processed ginger, also marketed in the form of fresh ginger, that is after harvest, ginger is cleaned and sold to the market. Ginger that is ready to be marketed to herbal companies must be of good quality so a strategy for marketing ginger is needed.

In Karanganyar Regency there was an agribusiness development center for superior commodities of medicinal plants. Production of medicinal plants in Karanganyar Regency in 2016 that produces the most is ginger of 34,735 Quintal [5], it is known that ginger is a very important plant, so it needs a good agribusiness development, so that the results and goals can be achieved optimally both in quantity, quality and continuity. In doing business certainly do not want to lose, this can be done by arranging the financing and application of a good marketing strategy that can be applied. For this reason, farmers need to gain knowledge in planning and calculating business profits and knowledge of product price information and also support in the form of production facilities. To realize this, we need to identify any subsystems that need to be known to formulate a good marketing strategy. Based on the problem, the purpose of this study is to identify internal condition (Strength and Weakness) and external (Opportunity and Threat) in ginger marketing system in Karanganyar Regency and to formulate alternative strategy what can be applied in the marketing of ginger in Karanganyar Regency.

2. Methods

Data analysis is done by using several ways, that are: 1) Descriptive research is used to describe the company's vision and mission statement, the characteristics of products or services, the level of achievement of sales targets, and management information systems applied by the company. The determination of key informants in this study was chosen deliberately. Key informants are the informants who really have credibility and a deep understanding of ginger marketing in Karanganyar Regency. Key informants in this study were ginger farmers, wholesalers, merchant collectors, competitors and the government (Agricultural Service officers, cooperative service officers, and micro-units). The data collection technique is by interviewing, namely getting information by asking directly to key informants.

Data collection techniques are also carried out in the observation process of the state of production and marketing activities. Furthermore, the recording technique is carried out on the results of interviews on a list of questions and data obtained from secondary data sources that have links with research. 2) External Environmental Analysis and Internal, 3) IFE Matrix and EFE Matrix are used to analyze internal and external factors, classify them into strengths and weaknesses as well as opportunities and threats of the company, 4) Internal-External Matrix (IE) is used to know the business position so it can know the right strategy to develop business. 5) Determination of ginger marketing strategy used SWOT Matrix analysis. Through this analysis, the company is expected to develop various alternative strategies based on the combination of strength, weakness, opportunity, and threat factors. The SWOT matrix is an important tool for a manager in developing four types of strategies, namely SO (Strengths- Opportunities), WO (Weakness-Threats), ST (Strength-Threats), and WT (Weakness-Threats), and 6) QSP Matrix used to decide on goals among alternative strategies. QSPM used input from phase 1 analysis (IFE matrix and EFE matrix), phase 2 matching results (IE matrix and SWOT matrix) That is, stage 2 provides the information needed to define QSPM.

3. Results and discussion

3.1. Identify factors of strength, weakness, opportunities and threats

Based on the results of internal and external factors analysis on ginger business, it can be identified strengths, weaknesses, opportunities and threats that affect the marketing of ginger in Karanganyar Regency. The results of the identification are as follows.
The internal environment discusses the strengths and weaknesses of ginger marketing. Internal factors used in the study consist of human resources, product, price and promotion. While the external environment leads to the opportunity and the threat of marketing ginger. External factors discussed in this study consist of government, suppliers, competitors, marketers, consumers and technology. The variables of each internal and external factors can be seen in Table 1.

**Table 1.** Identification of strengths, weaknesses, opportunities and threats in ginger marketing in Karanganyar Regency

| Strategic factor | Strength                                                                 | Weakness                                      |
|------------------|---------------------------------------------------------------------------|-----------------------------------------------|
| **Internal Factors** |                                                                            |                                               |
| Human Resources  | - Business experience                                                     | - Less innovation                             |
|                  | - Planting skills                                                         | - Old age                                     |
|                  | - Patience                                                                |                                               |
| Product          | - Availability various types of ginger                                     | - Low labor ethic                             |
|                  | - Good Quality                                                            | - Ginger cultivation takes a long time        |
| Price            | - Competitive price                                                       | - There is no standard price                   |
| Promotion        | - Has been known as the third largest ginger producer in Indonesia         | - Have not used promotion media               |
|                  | - ginger’s consumer has been spread in most provinces in Indonesia         |                                               |
| Place/Distribution | - Easy distribution facilities                                            | - The narrow field for production             |
|                  | - Sales continuity                                                        |                                               |
| Finance          | - Use independent funds                                                    | - Capital limit                               |
|                  |                                                                           | - financial management hasn’t been neatly arranged |

| External Factors | Opportunity | Threat                                      |
|------------------|-------------|---------------------------------------------|
| Government       | - Training on ginger cultivation                                        | - Limited trainer                            |
|                  | - Farm location suitable for ginger production                           |                                               |
|                  | - Support in event/exhibition                                             |                                               |
| Suppliers        | - A good relationship with suppliers                                      | - the quality of raw material the dry season is decreasing |
|                  |                                                                         | - price fluctuation                          |
| Competitors      | - Produce and sell various types of ginger                               | - The increment of ginger products from synthetic materials |
|                  |                                                                         | - Competition from similar producers         |
|                  |                                                                         | - distribution cost is expensive             |
| Marketing institutions | - Loyal customers            | - Bad weather threats during distribution    |
|                  | - Strategic location because in the tourist attraction                   |                                               |
| Consumers        | - High interest from ginger’s consumer                                   | - Fluctuating ginger’s prices                |
| Technology       | - The growing of Technology information                                  | - Lack of knowledge of Technology information |
|                  |                                                                         |                                               |
3.2. Analysis of alternative strategy determination

3.2.1. Internal Factor Evaluation Matrix (IFE Matrix). IFE matrix is used to evaluate internal business factors related to company strengths and weaknesses. Data and information are derived from the analysis of strengths and weaknesses in aspects of the marketing mix, production capacity and process, financial and capital allocation, human resources, product and technology reputation [6]. After the identification, the weighted values obtained from the product of the weight of the rating on the IFE matrix resulted in a total weighting was 3.025. This means that the company's internal position is in a strong position to deal with existing weaknesses. The most dominant internal factor which is the strength of business with a value of 0.6 was the quality of ginger. While the weakness factor that has the greatest influence on the business among others, there is no standard price of ginger and narrow field is equal to 0.2. Production costs per unit of products that are not so expensive result in the sale price of ginger also become normal. The IFE matrix can be seen in Table 2.

Table 2. Internal matrix of ginger cultivation in Karanganyar Regency

| Internal Factor                                      | Weight | Rating | Total weight |
|------------------------------------------------------|--------|--------|--------------|
| **Strength**                                         |        |        |              |
| • Human Resources                                    |        |        |              |
| a. Business Experience                               | 0.050  | 4      | 0.2          |
| b. Planting skills                                   | 0.100  | 3      | 0.3          |
| c. Penitence                                         | 0.025  | 3      | 0.075        |
| • Product                                            |        |        |              |
| a. Availability 3 types of Ginger                    | 0.025  | 3      | 0.075        |
| b. Good quality                                      | 0.150  | 4      | 0.6          |
| • Price                                              |        |        |              |
| a. Competitive price                                 | 0.100  | 4      | 0.4          |
| • Promotion                                          |        |        |              |
| a. Has been known as the third largest ginger producer in Indonesia | 0.025  | 3      | 0.072        |
| b. Consumer of Ginger has spread in most provinces of Indonesia | 0.050  | 4      | 0.2          |
| • Place/distribution                                 |        |        |              |
| a. Easy distribution facility                        | 0.025  | 4      | 0.1          |
| b. Continuity product                                | 0.050  | 3      | 0.2          |
| • Finance                                            |        |        |              |
| a. Use independent funds                             | 0.050  | 3      | 0.15         |
| **Weakness**                                         |        |        |              |
| • Human Resources                                    |        |        |              |
| a. Less innovation                                   | 0.025  | 1      | 0.025        |
| b. Old age                                           | 0.025  | 2      | 0.05         |
| • Product                                            |        |        |              |
| a. The number of farmers who produce ginger still low | 0.025  | 1      | 0.025        |
| b. Ginger crop harvest takes a long time             | 0.050  | 2      | 0.1          |
| • Price                                              |        |        |              |
| a. There is no standard price yet                    | 0.100  | 2      | 0.2          |
| • Promotion                                          |        |        |              |
| a. Haven’t used promotional media yet                | 0.025  | 2      | 0.05         |
| • Distribution                                       |        |        |              |
| a. Narrow field                                      | 0.100  | 2      | 0.2          |
| • Finance                                            |        |        |              |
| a. Capital limit                                     | 0.050  | 2      | 0.1          |
| b. Financial accounting hasn’t been neatly arranged  | 0.025  | 2      | 0.05         |
| **Total**                                            | 1.000  | 3      | 3.025        |
3.2.2. External factor evaluation matrix (EFE Matrix)

EFE matrix is used to evaluate external factors of business that directly or indirectly affect a business. Data and information are derived from analysis of opportunity and threat factors on aspects of consumers, suppliers, competitors, marketing intermediaries, government. The multiplication result between the weighting average and the rating resulted in a total weighting of 2.825. The figure indicates the effort has a good enough ability to take advantage of existing opportunities and overcome the threat that will arise. The main opportunities for this business based on the highest score are assistance facilities and product infrastructure which is 0.4. With the assistance facilities and product infrastructure also training of producers on the cultivation of ginger, the opportunity for the development or improvement of quality of ginger business will getting better. Similar products from competitors became the most dominant threat because the value reached 0.225. This factor is very closely related to the existence of ginger competitors are ginger producers located in Sukoharjo regency where they also cultivate various types of ginger as cultivated in Karanganyar regency. The EFE matrix results tale can be seen in Table 3.

Table 3. External matrix of ginger cultivation in Karanganyar Regency

| External Factor | Weight | Rating | Total weight |
|----------------|--------|--------|--------------|
| Opportunity    |        |        |              |
| Government     |        |        |              |
| d. Training/counseling about ginger cultivation | 0.075 | 4 | 0.3 |
| e. Assistance facilities and product infrastructure | 0.100 | 4 | 0.4 |
| f. Support in Event/Exhibition/Showroom | 0.050 | 3 | 0.15 |
| Suppliers      |        |        |              |
| c. Good relationship with suppliers | 0.075 | 4 | 0.3 |
| Competitor     |        |        |              |
| b. Produce and sell various kind of Ginger | 0.025 | 3 | 0.075 |
| Marketing institution |        |        |              |
| c. Loyal costumers | 0.050 | 3 | 0.15 |
| d. Strategic location in the tourist attraction | 0.025 | 2 | 0.05 |
| Consumer       |        |        |              |
| c. High interest from Ginger’s consumer | 0.075 | 4 | 0.3 |
| Technology     |        |        |              |
| b. The growing of information technology | 0.025 | 3 | 0.075 |
| Threats        |        |        |              |
| Government     |        |        |              |
| c. Limited trainer | 0.050 | 2 | 0.1 |
| Supplier       |        |        |              |
| c. The quality of raw material the dry season is decreasing | 0.075 | 2 | 0.15 |
| d. Price fluctuation | 0.100 | 2 | 0.2 |
| Competitors    |        |        |              |
| b. The increment of ginger products from synthetic materials | 0.025 | 1 | 0.025 |
| e. Competition from similar producer | 0.075 | 3 | 0.225 |
| Marketing institution |        |        |              |
| d. Distribution cost is expensive | 0.025 | 1 | 0.025 |
| b. Threat from bad weather during distribution | 0.025 | 2 | 0.05 |
| Consumer       |        |        |              |
| b. Ginger prices are fluctuating | 0.050 | 2 | 0.1 |
| Technology     |        |        |              |
| c. Less mastery of technology information | 0.050 | 3 | 0.15 |
| Total          | 1.000  | 2.825  |              |
3.2.3. Internal external matrix. Based on IFE analysis obtained the total weighted value with the number 3,025, while the total weighted value of EFE was 2.825. The total weighted values in the IFE and EFE matrices are then mapped in the IE matrix so that the firm position can be known. Based on the IE matrix in figure 1 it can be seen that the ginger cultivation business position is in cell IV. The position indicates that the business is in a position with the strategy of market development strategy and product development strategy. Market development strategy aims to enlarge market share by strengthening ginger in the existing marketing area and introducing ginger from Karanganyar Regency to other areas that do not know the product. While the product development strategy is related to the products it is marketed.

![External Internal Matrix of Ginger Cultivation](image)

**Figure 1.** External Internal Matrix of Ginger Cultivation

3.2.4. Alternative strategy. Alternative ginger marketing strategies that can be applied are formulated by using SWOT Matrix analysis. As a sequence of previous stages in the SWOT matrix, it clearly illustrates the internal strengths and weaknesses of ginger marketing combined with external opportunities and threats so that alternative marketing strategies can be produced. In this SWOT matrix, there are four possible alternative strategy cells that are a combination of internal and external factors, i.e., S-O strategy, W-O strategy, W-T strategy, and S-T strategy [7]. Some alternative strategies that can be applied in marketing ginger in Karanganyar Regency include:

- **S-O Strategy**
  - Maintaining quality and improving the product quality of ginger
  - Optimizing farmer institutions to build partnership systems with suppliers and consumers

- **W-O Strategy**
  - Optimizing the role of related agencies to improve knowledge and skills and generate interest in the cultivation of ginger
  - To seek the provision of adequate facilities and infrastructure for the continuity and smoothness of agribusiness activities in the production site

- **S-T Strategy**
  - Expand the marketing network and get closer to the consumer
  - Maintain consumer confidence with product quality through better production management.

- **W-T Strategy**
  - Improve distribution efficiency
  - Increasing the adoption rate of farmer technology in ginger cultivation

3.2.5. Priority Strategy. The final stage of strategy analysis is the selection of appropriate strategies and can be executed by the manufacturer. The selection of a suitable strategy is to use the QSPM analysis tool. Strategic alternatives are derived from the SWOT matrix in which the matrix produces several strategic alternatives through internal and external factors [8].
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Table 4. Quantitative strategic planning marketing matrix of ginger in Karanganyar Regency

| Strategic factors                                         | Weight | Alternative strategy |
|-----------------------------------------------------------|--------|----------------------|
| **Internal key factors**                                  |        | AS  | TAS | AS  | TAS | AS  | TAS |
| 1. Business experience                                    | 0.025  | 2   | 0.05| 3   | 0.075| 4   | 0.1 |
| 2. Planting skills                                        | 0.075  | 4   | 0.3 | 2   | 0.15 | 3   | 0.225|
| 3. Patience                                               | 0.025  | 2   | 0.05| 1   | 0.025| 3   | 0.075|
| 4. Availability with 3 types of Ginger                   | 0.025  | 4   | 0.1 | 2   | 0.05 | 3   | 0.075|
| 5. Ginger Quality                                        | 0.100  | 2   | 0.2 | 3   | 0.3  | 4   | 0.4 |
| 6. Competitive price                                      | 0.05   | 3   | 0.15| 2   | 0.1  | 1   | 0.05|
| 7. has been known as the third largest ginger producer in Indonesia | 0.05   | 3   | 0.15| 2   | 0.1  | 1   | 0.05|
| 8. Consumer ginger has spread in most provinces of Indonesia | 0.075  | 3   | 0.225| 2   | 0.15 | 1   | 0.075|
| 9. Easy distribution facilities                            | 0.05   | 2   | 0.1 | 3   | 0.15 | 4   | 0.2 |
| 10. Continuity product                                    | 0.15   | 4   | 0.6 | 3   | 0.45 | 2   | 0.3 |
| 11. Use self-funds                                        | 0.025  | 2   | 0.05| 4   | 0.1  | 3   | 0.075|
| 12. Less innovation                                       | 0.025  | 3   | 0.075| 2   | 0.05 | 1   | 0.025|
| 13. Old age                                               | 0.025  | 3   | 0.075| 4   | 0.1  | 2   | 0.05|
| 14. The number of farmers who produce ginger is still low | 0.05   | 4   | 0.2 | 3   | 0.15 | 2   | 0.1 |
| 15. Ginger crop harvest takes a long time                 | 0.05   | 2   | 0.1 | 4   | 0.2  | 3   | 0.15|
| 16. There is no standard price yet                        | 0.05   | 2   | 0.1 | 3   | 0.15 | 1   | 0.05|
| 17. Haven’t used promotional media yet                    | 0.05   | 4   | 0.2 | 3   | 0.15 | 2   | 0.1 |
| 18. Narrow field                                          | 0.025  | 3   | 0.075| 2   | 0.05 | 1   | 0.025|
| 19. Capital limit                                         | 0.05   | 3   | 0.15| 4   | 0.2  | 2   | 0.1 |
| 20. Financial accounting hasn’t neatly arranged           | 0.025  | 3   | 0.075| 2   | 0.05 | 1   | 0.025|

**Total**  

| 1. Training                                              | 1.00   | 2.975 | 2.775 | 2.275 |
|---------------------------------------------------------|--------|-------|-------|-------|
| 2. Assistance facilities and product infrastructure      | 0.05   | 3     | 0.15  | 2     | 0.1  | 4    | 0.2 |
| 3. Support in Event / exhibition/Showroom                | 0.15   | 3     | 0.45  | 4     | 0.6  | 2    | 0.3 |
| 4. Good relationship with suppliers                      | 0.025  | 2     | 0.05  | 3     | 0.075| 4    | 0.1 |
| 5. Produce and sell various kinds of Ginger              | 0.075  | 2     | 0.15  | 3     | 0.225| 1    | 0.075|
| 6. Loyal consumer                                        | 0.025  | 2     | 0.25  | 3     | 0.375| 4    | 0.5 |
| 7. Strategic location at tourist attractions             | 0.125  | 2     | 0.25  | 3     | 0.375| 4    | 0.5 |
| 8. High interest from Ginger’s consumer                  | 0.05   | 3     | 0.15  | 1     | 0.05 | 2    | 0.1 |
| 9. The growing of technology information                 | 0.05   | 4     | 0.3   | 2     | 0.15 | 3    | 0.225|
| 10. Limited trainer                                      | 0.05   | 4     | 0.1   | 3     | 0.225| 1    | 0.05 |
| 11. the quality of raw material the dry season is decreasing | 0.05   | 2     | 0.1   | 3     | 0.15 | 1    | 0.05 |
| 12. Price fluctuation                                    | 0.025  | 2     | 0.05  | 1     | 0.025| 3    | 0.075|
Based on the results of analysis using QSP matrix, the best marketing strategy that can be applied in marketing ginger in Karanganyar Regency is improve the quality of human resources through optimization the role of related offices to improve knowledge and skills also generate interest in ginger cultivation which will influence the improvement of technical quality, motivation of ginger producers in managing their business so it is expected to improve the competitiveness of ginger products. The value of TAS (Total Attractive Score) of the alternatives was 5.700 as well as the highest TAS value among other alternative TAS marketing strategies. By improving the quality of human resources producers will be beneficial for the implementation of ginger business so that it can increase the income of their family. Improving the quality of human resources will also improve the management capabilities of producers as well as in accessing everything that can be useful to develop their ginger cultivation business so that the goal of their business can be achieved also family income can be increased.

4. Conclusion

- The strategic factors in ginger marketing in Karanganyar Regency including:
  - strengths among others, business experience, planting skills, patience, availability with 3 kinds of ginger, good quality product, competitive price, popularity, consumer spread in most provinces in Indonesia, easy distribution, continuity of product, and use of independent fund;
  - Weaknesses among others, less innovation, old age, the number of farmers who produce ginger is still low, ginger harvest takes a long time, there is no standard price, haven’t used promotional media yet, narrow field, capital limit and financial accounting is not yet neatly arranged;
  - Opportunities include: training, assistance facilities and product infrastructure, government support in event/exhibition/showroom, good relationships with suppliers, producing and selling various types of ginger, loyal consumers, strategic location, high interest from ginger’s consumer, he growing of technology information;
  - Threat including limited trainer, the quality of raw material the dry season is decreasing, the price fluctuations, the increase of synthetic ginger products, the competition from similar producers, the expensive distribution cost, the threat of bad weather during the distribution, the fluctuating price of ginger in consumer level, less mastery of technology information.

- An alternative strategy that can be applied in marketing ginger at Karanganyar Regency, including:
  - SO Strategy (Strength-Opportunity): Maintaining quality and increasing quantity of the ginger product and optimizing farmer institution to build a partnership system with supplier and consumer;
  - WO (Weakness-Opportunity) Strategy: Optimizing the role of the relevant agencies to improve knowledge and skills and generate interest in ginger cultivation and promote the provision of adequate facilities and infrastructure for the continuity and smoothness of agribusiness activities at the production site;
  - ST Strategy (Strength -Threat): Expanding network marketing and approach to consumers and Keeping consumer trust with product quality and continuity through better production management;
- WT (Weakness-Threat) Strategy: Improving the efficiency of ginger distribution and Increasing the adoption rate of farmer technology in ginger cultivation.

- The strategic priority that can be applied in marketing ginger in Karanganyar Regency based on QSP matrix analysis is to improve the quality of producer human resources through the optimization of the role of related offices to improve the knowledge and skills and generate interest in ginger cultivation.

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