

## Analysis of Market Structure and Behavior for the Resilience of Msmes Agro-Food Industry in Malang City



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**ABSTRACT:** Common and chronic problems of Indonesian MSMEs, including food agro-industry MSMEs, are limited capital, entrepreneur or labor skills, product appearance and quality, and access to product sales and/or marketing management. Based on the empirical problems of MSMEs, the potential of agro-industry and markets, as well as the importance of MSMEs for the community's economy, it is necessary to conduct research on "Analysis of Structure and Behavior for the Resilience of Food Agroindustry MSMEs in Malang City". Of the 30 Food Agroindustry MSMEs that have the appropriate criteria as respondents, there are only 16 people who are willing to take the time to be involved in this research, so these 16 respondents will be used as respondents to the Food Agroindustry MSMEs in Malang City. Data analysis methods used Structure, Share, and market behavior. From the results of the Structure Analysis study, Behavior in the Food Agroindustry MSME Market in Malang City, it can be concluded that the market structure is analyzed by the number of producers and consumers, the presence of products traded, market concentration ratio 0.0664 which indicates including monopolistic competition markets, the highest market share of fruit chip producers by 27 percent, the Minimum Efficiency Scale value of 25 percent which indicates there are barriers to market entry. Market behavior can be analyzed by product strategy, innovation, and research by MSMEs Food Agriindustry Malang City, product differentiation through price, quality, and marketing techniques.

**KEYWORDS:** Market Structure, Market Share, Market Perilkau, MSMEs

### INTRODUCTION

Common and chronic problems of Indonesian MSMEs, including food agro-industry MSMEs, are limited capital, entrepreneur or labor skills, product appearance and quality, and access to product sales and/or marketing management. The main problem of food agroindustry development is the unfulfilled product diversity, good processed food production methods, quality, continuity of supply, and quantity in accordance with the dynamics of market demand and consumer preferences (Lokollo et al., 2001).

Agroindustry is a company that processes vegetable or animal materials including post-harvest handling, processing both into finished and semi-finished materials, preservation, storage, packaging, and distribution (Austin, 1981). This agro-industrial product can be a final product that is ready for consumption or as a product of other industrial raw materials. Agroindustry is an interconnected activity between production, processing, transportation, storage, funding, as well as marketing, and distribution of agricultural products. The food and beverage industry or known as the food industry is part of the downstream industry of the agro-industrial sector.

The food and beverage sector will continue to grow and become the mainstay of the non-oil and gas processing industry sector, supported by strong consumer demand in the domestic market. Food entrepreneurs target students and university students, as well as immigrants who aim to work or travel as target consumers for their businesses so that businesses in the food sector are expanding in Malang City. Conducive market conditions and potential, economic multiplier effects, and large consumer spending opportunities should be a trigger for the growth of the food agro-industry in the city of Malang. However, as a logical consequence of business, the attractive business environment conditions have certainly increased business competition implications. Therefore, all MSME actors must strive to build MSME resilience, including by finding solutions to MSME problems through scientific research.

The ability and readiness to compete in a healthy agro-industry are very necessary, following the global era of business competition which is also increasingly tight. Strengthening competitiveness and competitive culture is intended so that the industry is able to survive, making products needed by the community with the best quality so that consumers remain loyal because, in addition to quality products, excellent service is also a demand for the food industry consumers. High competitiveness

## Analysis of Market Structure and Behavior for the Resilience of Msmes Agro-Food Industry in Malang City

is indispensable for every industry to stay ahead. This also applies to MSMEs in Malang City as a city of education and tourism. The existence of Malang as a city of education and tourism has positive implications as a large market for the development of the food business. In the city of Malang, there are 62 public and private universities that continue to grow. Malang City which has a population of 843,810 people and the surrounding area has beautiful and interesting tourist destinations, is a great potential for MSME players to develop their food business in Malang City.

Solutions to deal with agro-industrial development problems, including the food processing sector, need to be done with a comprehensive approach by paying attention to all aspects from upstream to downstream. Efforts in increasing production, improving distribution, and improving quality need to be carried out in an integrated manner so that it can benefit all parties. For this reason, the market structure and behavior approach is considered important so that there can be an increase in product competitiveness through increasing market efficiency, innovation in both products and marketing strategies, and increasing other resources so that market access is stronger so that the business is able to compete with its emerging competitors. Based on the empirical problems of MSMEs, the potential of agro-industry and markets, as well as the importance of MSMEs for the community's economy, it is necessary to conduct research on "Analysis of Structure and Behavior for the Resilience of Food Agroindustry MSMEs in Malang City".

### RESEARCH METHODS

The location of the study was determined in Malang City by considering that Malang City has extraordinary potential for the development and development of businesses in the field of food agro-industry. The object of this research is Food Agroindustry MSMEs, namely food and beverage business actors who live or live in Malang City. Of the 30 Food Agroindustry MSMEs that have the appropriate criteria as respondents, there are only 16 people who are willing to take the time to be involved in this research, so these 16 respondents will be used as respondents to the Food Agroindustry MSMEs in Malang City.

Market structure is information about business behavior and market performance described through market conditions. The type of market structure can be known through market concentration. Market structure can be analyzed using the concentration ratio is a statistic that measures the control of market share by a number of companies in the industry. It shows the size of the company in relation to the industry as a whole. The concentration ratio can be measured using the following formula.

$$CR4 = \frac{C1 + C2 + C3 + C4}{C \text{ total}} \times 100\%$$

Information:

CR4 = Concentration Ratio

C1,2,3 = Company turnover 1,2,3,4

C total = Total turnover of all Food Agroindustry MSME markets

The concentration ratio ranges from zero to one. A concentration value close to zero indicates that some companies have a relatively small market share. Conversely, a concentration ratio number close to one indicates a relatively high concentration level. Several market categories can be defined using CR4 to describe the level of competition or competition.

**Table 1. Concentration Ratio Classification**

Value CR4	Category	Interpretation Related to Market Structure
CR4=0	Minimum	Perfect Competition
0<CR4<40	Low	Effective competition or monopolistic competition
41<CR4<60	Lower middle	Loose oligopolistic competition
61<CR4<90	Upper middle	Strict oligopolistic or dominant firm with Competitive fringe
91 < CR4<99	Tall	Dominant companies with competitive fringe
CR=100	Maximum	Perfect monopoly

Source: Zuher dan Yusdiarti, (2021)

Market share is information that provides an overview of the total sales of a company to a certain market segment. Usually, the data is displayed in percentage form. In general, market share is business sales data divided by the total sales of the same industry. Market Share can be calculated using the following calculations.

$$\text{Market share} = \frac{\text{company sales value}}{\text{total sales value in the same market}} \times 100\%$$

Market entry barriers are determined using the Minimum Efficiency Scale (MES) method, to see how big the barriers to entry and

## Analysis of Market Structure and Behavior for the Resilience of Msmes Agro-Food Industry in Malang City

competition for the market.

$$MES = \frac{\text{biggest sales}}{\text{Total production of all products in the market}} \times 100\%$$

According to Jaya in Sinaga (2014) states that if the MES value is greater than 10%, then it can be said that there are barriers to entry into the market. Market behavior includes analysis of the availability of product raw materials, research and innovation carried out, cooperation with other parties, the legality of the business owned, and product differentiation carried out by MSMEs Food Agroindustry Malang City.

## RESULTS AND DISCUSSION

### Market structure

Malang City Food Agroindustry MSMEs are food and beverage business actors domiciled in Malang City and use local wisdom raw materials obtained from agricultural, livestock, and fishery business units of Malang City or obtained in the local market of Malang City and its surroundings which include Malang Regency and Batu Administrative City. Agroindustry is one of the sectors that is able to increase the income of agribusiness players, is able to increase foreign exchange earnings, and is able to encourage the emergence of other new industries.

The number of producers and consumers of Food Agroindustry MSMEs in Malang City where 16 respondents who are actively running a business in Malang City has consumers totaling 3253 consumers spread both in Malang City and outside Malang City who have been buying to directly consume or resell the Food Agroindustry MSME products. There are buying and selling activities with producers and consumers who transact with each other in buying and selling.

Malang City Food Agroindustry MSME products are very diverse which according to Phillip Kotler (2000) includes daily necessities products, a product that is needed and will run out more easily if used so that they will be more often purchased by consumers, such as foodstuffs, beverages. It can also be categorized as a Complementary Product product, which means it is a product that has many benefits and services that can increase satisfaction and can also be distinguished from other products. Some products such as BungaTelang, instant herbs can be included in the Potential Product class, which is an additional type or change that may be developed in a product in the future.

The type of market structure can be determined by calculating the Concentration Ratio which is a statistical measure that measures the satisfaction of market share over a number of companies in a particular area. The concentration ratio is one of the quantitative indicators of the level of competition or monopoly power in an industry. The higher the ratio, the greater the level of concentration. The calculation of the Market Concentration Ratio can follow the following formula.

$$CR4 = \frac{100 + 60 + 60 + 30}{376,5} \times 100\%$$
$$CR4 = \frac{250}{376,5} \times 100\% = 0,664$$

From the calculation above, it is known that the Market Concentration is at a value of 0.664 obtained by collecting the turnover value of the four largest Food Agroindustry MSMEs compared to the total turnover of all respondents, where the figure shows that the market concentration of Food Agroindustry MSMEs in Malang City is low, competition runs very effectively and is included in the criteria of Monopolistic Market Structure.

### Market Share

Market share is information that provides an overview of the total sales of a company to a certain market segment. Usually, the data is displayed in percentage form. In general, market share is business sales data divided by the total sales of the same industry. To find out the market share of Food Agroindustry MSMEs in Malang City, it can be obtained from the sales data of food Agroindustry MSMEs compared to all sales of Food Agroindustry MSMEs in Malang City. The next important role of market share is as a benchmark to find out how effective the marketing strategy is run. The greater the market share of MSMEs, the greater the influence of the marketing strategy used. Data obtained that the highest market share was controlled by Herry Suharto's Food Agroindustry MSMEs with fruit chips with a value of 27 percent, then followed by respondents on behalf of Mrs. Karsi who produces Tempeh Chips and Mrs. Marwiyah with her instant Herbal products each occupying a market share of 16 percent

### Market Entry Barriers

Jaya in Sinaga (2014) stated that market entry barriers can be analyzed using the Minimum Efficiency Scale (MES) method where this method is used to see how big the barriers are for marketing institutions or new producers to enter and compete for market

## Analysis of Market Structure and Behavior for the Resilience of Msme Agro-Food Industry in Malang City

share. If the MES value is greater than 10%, it initiates barriers to market entry. The number of products of each Malang City Food Agroindustry MSME taken at the same price period, namely January 2023, so that the MES analysis can be carried out as follows.

$$MES = \frac{13.333}{51.716} \times 100\% = 25,75 \%$$

The MES value of the Agroindustrial Food Industry MSME market in Malang City of 25 percent illustrates that in the Malang City Agroindustry market, there are obstacles that must be considered and addressed by new challengers who will take advantage of the market opportunity. In monopolistic markets, the level of competition is high. Manufacturers who do not have capital in the sense of good quality products or sufficient experience will be quickly eliminated. It takes a lot of capital to enter into monopolistic markets because market players have high economies of scale. Markets with monopolistic structures that have characteristics including high competition, goods or products of various types and each cannot dominate price determination will continue to move activities and give birth to updates to increase their capacity.

### Market behavior

Analysis of market behavior is carried out descriptively by referring to the existing market structure. Based on the analysis, the structure in the Malang City Food Agroindustry MSME market is the Monopolistic Market. Being between two types of markets, namely perfect competition and monopoly is something that can be defined from monopolistic markets. Therefore the traits possessed by monopoly markets and perfectly competitive markets, also exist within monopolistic markets.

#### 1. Product strategy

Agro-industrial MSMEs in Malang City generally use local wisdom materials for raw materials and auxiliary materials. The potential of agriculture and the availability of raw materials in several markets in Malang City and its surroundings benefit Food Agroindustry MSMEs in preparing and meeting the needs of industrial raw materials so that the constraints of unavailability of raw materials can be avoided. Although agricultural land that is able to prepare all needs is not available because the function of the land has changed a lot, the operation of the Gadang Main Market, Malang City Big Market, Karangploso Vegetable Market, Batu City Vegetable and Fruit Market, Lawang transit market and Poncokusumo vegetable center is the navel for shopping for materials needed by Food Agroindustry MSMEs.

#### 2. Innovation and Market Research

Food Agroindustry MSMEs in Malang City in their production activities have mostly innovated the products produced, so there are periodic changes related to the products produced, starting from the simplest how they manage the raw materials used in their business to make it easier to handle and store, always observing consumer demand to increase sales. Agroindustrial MSMEs in Malang City are very enthusiastic about holding lessons by asking for a visitors guide to the Food and Beverage UPT to get an overview of packaging and production technical developments through the Food and Beverage Processing Workshop of the East Java Provincial Industry Office, which is one proof that product innovation and market research are their agenda in order to increase their capacity as Food Agroindustry MSMEs.

#### 3. Differensiasi Produk

Product differentiation is also a service to consumer needs. An example is done by Mrs. Karsi, MSME Agroindustry of Tempeh Chips Processed Food. His tempeh-based business is not only processed into tempeh chips with original tempeh flavors but also processed tempeh chips coated with various flavors to provide choices to consumer preferences. Besides the different tastes, the packaging is also tailored to the needs of consumers from different circles, starting from the price packaging.

## CONCLUSION

From the results of the Structure Analysis study, Behavior in the Food Agroindustry MSME Market in Malang City, it can be concluded that the market structure is analyzed by the number of producers and consumers, the presence of products traded, market concentration ratio 0.0664 which indicates including monopolistic competition markets, the highest market share of fruit chip producers by 27 percent, the Minimum Efficiency Scale value of 25 percent which indicates there are barriers to market entry. Market behavior can be analyzed by product strategy, innovation and research by MSMEs Food Agroindustry Malang City, product differentiation through price, quality and marketing techniques, cooperation between producers or marketing institutions to help each other and complete business legality requirements in accordance with applicable government regulations either through facilitation or independent obligations.

## Analysis of Market Structure and Behavior for the Resilience of Msmes Agro-Food Industry in Malang City

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