MARKETING EFFICIENCY OF THE "*EMPING MELINJO* " IN FARMER WOMEN GROUPS IN BATANG REGION, CENTRAL JAVA

Djeimy Kusnaman[1*]
Sunendar[2]
Syahrul Ganda Sukmaya[3]

[1,2,3] Universitas Jenderal Soedirman

[*]*Corresponding Author: djeimy.kusnaman@unsoed.ac.id*

ABSTRACT

This study aims to examine the marketing efficiency of processed melinjo in women's farmer groups with data collected in Batang Regency, Central Java. Emping melinjo has contributed to providing additional work for mothers as a side business. The method used in this research is a survey of KWT Tani Rejo. Melinjo emping producer data was collected by purposive (deliberate) and traders' samples were done by snowball sampling and respondents were taken by census on all members of KWT Tani Rejo. The data obtained were analyzed descriptively and calculated using margin analysis and farmer share. The results show that the first channel of emping melinjo marketing is the most efficient than the second and third channels. Producers accept higher prices and do not bear marketing costs, because they sell directly to consumers. Meanwhile, marketing efficiency on channels 2 and 3 is greater than 30%. Margins on channels 2 and 3 reached 40% and 16% respectively. Marketing actors include producers, collectors, wholesalers, agents, and retailers. The involvement of women in this business group is due to limited costs and access to market information.

Keywords: *emping melinjo, farmer women group, marketing efficiency.*

INTRODUCTION

MSMEs are labor-intensive and local resource-based businesses that are able to be future-oriented with good performance (Aggarwal, 2021)(Chakraborty et al., 2021). A business that adopts a craft orientation will have a better performance than a business that does not adopt (Andreas et al, 2009). The increasing rate of unemployment and

poverty in villages to big cities encourages Micro, Small and Medium Enterprises (MSMEs) to rise up as a means of building the Indonesian economy (Megawati Yuliana Putri, 2021)(Jauhari & Periansya, 2021). There are many businesses engaged in the local food industry. One example is in the melinjo processing industry. Melinjo is one of the side dishes for culinary delights such as soto, pecel, and ketoprak. Melinjo seeds have nutritious substances, and are snacks in some areas (Tatefuji et al, 2014). Along with the popularity of melinjo chips, people in the area began to be interested in the melinjo processing industry. One of them is Central Java, namely Batang Regency. This makes the movement of the melinjo processing industry very potential to become melinjo chips.

Another review that shows that in Batang Regency is the largest melinjo processing industry, one of which is in Central Java, namely with data from the Batang Regency UMKM Service which shows that the melinjo processing unit is superior. Table 2 shows that the most melinjo SMEs industry is in Batang Regency, so that Batang Regency becomes a center for *emping melinjo* processing.

Table 1. Types of SMEs in Batang

Type UMKM	Business unit
Emping melinjo	6250
Red Brick	362
Pindang fish	225
Casava chips	215
Honey	198

Source : Batang Regency Cooperatives and SMEs Office 2017

Emping melinjo is determined by the local government as one of the leading commodities in Batang Regency based on the largest number of business units. This effort is through one village one product (OVOP) to show the melinjo emping business to be the center. In addition, the government of Batang Regency has a policy that is outlined in the program to bring up 1000 new craftsmen, so it is hoped that with this program, the *emping melinjo* processing industry can create new businesses through groups. One of them is through women farmer groups. Women Farmers Group is a place for women to learn, especially in agriculture(Margayaningsih, 2020)(Gramm et al., 2020).

In Limpung District there is only one group initiated by women, namely the Women Farmers Group (*KWT*) Tani Rejo. The group consists of many craftsmen and a few merchant. *KWT* Tani Rejo prefers to work in groups rather than work independently. This is done because of limited capital, lack of market access, lack of understanding of efficient product marketing chain patterns and the influence of someone who supports the group to remain active and can compete with other craftsmen melinjo. The women farmer groups that are incorporated are able to grow the welfare of their members. Therefore, it is very interesting to examine one of the MSMEs in Batang Regency, namely the *emping melinjo* processing business.

The supply chain in the melinjo chip processing industry is to increase producer income by determining efficient marketing channels (Yue, 2021)(Boris Kaido & Katsuhito, 2020). The supply chain for the *emping melinjo* industry in Banguntapan and Pajangan sub-districts, Bantul regency, Yogyakarta special region has 18 supply chain networks with 4 marketing channels (Sunendar & Zulkifli, 2021). Starting from these results, it can be used as a review for efficient supply chain research in the *emping melinjo* processing industry in Batang Regency. When producers can find out which channel pattern is more efficient it will help increase revenue.

The problems that occurred in Batang Regency did not increase from 2016-2017. Based on data from the Industry and UMKM Office of Batang Regency in 2016 there were 6358 melinjo processing business units and decreased in 2017 to 6250 business units. The decline in the number of MSMEs is due to problems such as lack of market access and the minimal margin obtained from *emping melinjo* craftsmen. *Emping melinjo* supply chain actors in Bantul Regency consist of farmers, melinjo traders, producers, collectors, wholesalers, retailers, consumers, packaging equipment providers, carrying workers, production workers, and firewood providers (Sunendar et al., 2019). The marketing channel for *emping melinjo* in Bantul Regency consists of four channels. There are several kinds of sales of *emping melinjo* from producers to consumers or users, namely direct sales to retailers, sales through collectors, sales through wholesalers, and sales through collectors and then wholesalers (Sunendar et al., 2019).

The marketing of *emping melinjo* in Batang Regency is not only marketed in the Batang area but also outside areas such as Bali, Surabaya, Kalimantan, and Jakarta, but marketing of *emping melinjo* outside the region requires more costs in shipping goods compared to marketing in the Batang area. Marketing of *emping melinjo* in Batang Regency is constrained by fluctuating demand, namely high demand at certain times such as before Eid al-Fitr, New Year's holidays, and before Eid al-Adha and before celebrations. The fluctuating consumer demand for *emping melinjo* is circumvented by production arrangements. Production arrangements are made by producing *emping melinjo* to meet daily demand and stocking *emping melinjo* to meet demand at a certain time. The existence of these production arrangements is expected to meet consumer demand for *emping melinjo* both in quality, quantity, time and place. However, not all *emping melinjo* craftsmen are able to make production arrangements. Based on the description above, the problems that will be discussed in this research are who are the marketing institutions involved, how is the pattern of marketing channels for *emping melinjo* in Batang Regency, and how to make *emping melinjo* marketing in Batang Regency efficient. The importance of analyzing the *emping melinjo* supply chain to be efficient. An efficient pattern of marketing channels will increase the price received by producers, so that producers will be more enthusiastic to produce.

LITERATURE REVIEW

Melinjo's Emping Supply Chain Performance in Bantul Regency, Special Region of Yogyakarta. *Emping melinjo* supply chain actors consist of upstream players including melinjo farmers and traders as well as downstream players, namely *emping melinjo* craftsmen and traders. Both upstream and downstream actors carry out exchange activities (buying and selling), physical (stripping, packaging, storage, transportation and loading and unloading) and facility activities (sorting and grading). There are 37 *emping melinjo* supply chain networks starting from upstream to downstream, starting with melinjo farmers in the DIY (Bantul, Gunungkidul) and Kebumen (Central Java) areas through melinjo traders, emping craftsmen, emping traders to emping consumers spread across the region. Bantul, Sleman, Gunungkidul, Yogyakarta City, Klaten, Solo, Magelang and Temanggung. Based on linear programming analysis, distribution costs will be minimum if 22 networks are used, namely 14 networks starting from melinjo farmers in Gunungkidul, 5 networks from melinjo farmers in Kebumen and 3 networks from melinjo farmers in Bantul, and ending with consumers in various regions in DIY and Central Java (Istiyanti, 2015).

Studying *Emping melinjo* Supply Chain Efficiency in Bantul Regency, Yogyakarta Special Region. The results showed that the marketing institutions involved in the marketing channel of *emping melinjo* include collectors, wholesalers, and retailers. The marketing of *emping melinjo* in Bantul Regency predominantly uses the first channel, namely sales from producers directly to retailers. Based on the linear program analysis, the results obtained are that the most efficient supply chain network is the distribution of *emping melinjo* from producers directly sold to retailers in Kotagede Market and Beringharjo Market. The distribution of *emping melinjo* after the allocation with the transhipment model will be more efficient because it will minimize the cost of Rp. 1,188,545.00 per week (Sunendar et al., 2019).

The supply chain is a breakthrough in the form of a series of integrated processes and product flows from companies that are members of the supply chain to meet customer needs. Efficient integration between suppliers, manufacturing companies, warehousing, transportation, distribution and retail (stores) allows goods produced and distributed to have good quality, the right quantity, the right supply time and location as well as optimal costs will increase customer satisfaction (Siahaya, 2013). The supply chain is a breakthrough in the form of a series of integrated processes and product flows from companies that are members of the supply chain to meet customer needs. Efficient integration between suppliers, manufacturing companies, warehousing, transportation, distribution and retail (stores) allows goods produced and distributed to have good quality, the right quantity, the right supply time and location as well as optimal costs will increase customer satisfaction (Sukri, 2020).

Examines the Identification of Shallot Supply Chain Risks in Nganjuk Regency. The shallot supply chain actors from Nganjuk Regency to Jakarta consist of seven actors,

namely farmers, slashers, large-scale collectors, dealers in PIKJ, centheng in PIKJ, retailers, and consumers. The results of pairwise comparisons in the AHP model show that supply chain profit balance is the most important thing for risk identification, followed by smooth product flow, money flow, and information flow, and finally supply chain efficiency. The results of risk identification using the AHP model show that there are three types of risks that need to be considered in the shallot supply chain from Nganjuk Regency to Jakarta, namely market risk, partnership and information risk, and price risk (Susanawati et al., 2017).

Examines Supply Chain Management and Oil Palm Competitiveness in Aceh. In the oil palm supply chain system in Nagan Raya District and West Aceh District, there are three typical systems determining the flow of FFB to the five main POMs in the West Coast Region of Aceh. The uniqueness of the supply chain system is determined by the magnitude of their respective roles in the FFB supply chain. The role of stakeholders in the oil palm supply chain system in Nagan Raya and West Aceh districts greatly determines the volume of supply, profits, and added value that is formed. The role of village collecting agents is the most dominant in the volume of FFB supply in the five main POMs. Factors that influence the performance of stakeholders and increase competitiveness for oil palm plantations in Nagan Raya District and Aceh Barat District are the weight of the actors' roles, cost contribution and selling price. The price of FFB has a significant effect on the added value of the FFB supply chain system. The benefits of actors involved in the supply chain system are determined by cost efficiency, and the volume of FFB supply (Jakfar et al., 2015).

RESEARCH METHOD

The selection of research locations was carried out purposively (deliberately) with the consideration that the location is the center of the melinjo processing industry and is the only area that has groups of women farmers, as well as micro, small and medium-sized craftsmen who are still active in the melinjo processing industry. The sampling technique of traders uses the snowball sampling technique, which is to follow the sales journey of *emping melinjo* from producers. Researchers followed the journey of selling *emping melinjo* from producers to consumers. In snowball sampling, initial identification starts with a person or case that meets the research criteria. Then based on direct or indirect linkages in a network, the next respondent or the next sample unit can be found (Nurdiani, 2014).

The respondents in this study were taken by means of a census. Respondents in this study were all members of *KWT* Tani Rejo in Limpung District, Batang Regency. The number of active members of *KWT* Tani Rejo is 30 people. Respondents were spread throughout Batang Regency, Central Java Province. The study was conducted for 6 (six) months in 2021. The limitation of the research was only for the Batang Regency area, this was done so that the research focused on the intended research location.

This research was conducted by survey method. Survey information was collected from respondents by interviewing the craftsmen of the melinjo processing industry. Interviews were conducted by directly asking melinjo emping producers, members of the Women Farmers Group, using structured questionnaire questions as an interview guide.

DATA ANALYSIS AND DISCUSSIONS

The data obtained were analyzed descriptively and calculated using margin analysis, farmer share, and linear programming. The marketing channel analysis of emping in Batang Regency uses descriptive analysis. This analysis includes network analysis, actors, actor activities, product flow, money flow, and information flow in the melinjo emping supply chain from Limpung District to several target markets. To find out marketing costs and marketing margins at the agency level in marketing channels, cost and marketing margin analysis is used (cost margin analysis) by calculating the costs, profits and marketing margins for each intermediary agency in various marketing channels.

The analysis of the efficiency of the *emping melinjo* supply chain in Batang Regency uses the transportation model. In the transportation model, what must be considered is that the total quantity in all rows must be equal to the total quantity in all columns, otherwise a dummy quantity must be added (Wang et al., 2021). The indicators used to determine supply chain efficiency in this study are marketing margins and setting the allocation of *emping melinjo* based on the smallest marketing cost calculation. Marketing margin is obtained from the difference between the selling price and the purchase price among marketing actors. The margin component also consists of marketing costs incurred by marketing actors and profits (profits) obtained. The data in this study is field data, does not require laboratory facilities and is 100% taken by the research team.

The *emping melinjo* processing industry in Batang Regency has become a regional flagship. This superiority is due to having the most business units, namely 6250 in 2017. MSMEs are mostly carried out by the people of Batang Regency, especially in Limpung District. The processing of *emping melinjo* is a business for processing flattened melinjo seeds, the processing base of which is still home to this industry, making it a lot of demand. The business of processing *emping melinjo* is mostly done by housewives. So it is not surprising that most of the melinjo emping craftsmen in Batang Regency are women.

The craftsmen for processing *emping melinjo* are the Women Farmers Group (*KWT*). The *KWT* in Ngaliyan Village, Limpung District, is named *KWT* Tani Rejo. *KWT* Tani Rejo is engaged in the processing of melinjo chips. This is because most of the residents' livelihoods in Limpung District are as emping craftsmen and in Ngaliyan Village is the forerunner of the beginning of *emping melinjo* craftsmen in Limpung sub-district. In addition, in this village there are also many melinjo trees which are used as the main raw

material for chips. Therefore, in Ngaliyan Village, a lot of *emping melinjo* are processed. The processing of melinjo in this village is coordinated through a group of women entrepreneurs whose group management is still simple. This is because the processing of *emping melinjo* is manual and the management system is still simple (Aman, Lia Yuliana, 2014) (Khairunnisa et al., 2019).

Marketing channel is a marketing channel from channeling institutions that have activities to distribute or distribute *emping melinjo* from *emping melinjo* craftsmen to consumers' hands (Lee et al., 2020). The length of the marketing channel affects the size of the costs to be incurred by the marketing agency and affects the size of the price paid by consumers (Mgale & Yunxian, 2020). The *emping melinjo* channel can be identified by following the flow and seeking information from *emping melinjo* craftsmen to the final consumer(Sunendar et al., 2019). There are three patterns of marketing channels for *emping melinjo* in Ngaliyan Village, Limpung District, Batang Regency, the following are the details:

1. Craftsmen – Consumers
2. Craftsmen – Collectors – Wholesalers – Retailers – Consumers
3. Craftsmen – Wholesalers – Agents

Of the three patterns of marketing channels, two of them use marketing agencies or intermediaries. Related marketing institutions are collectors, wholesalers, agents, and retailers. Of the 40 melinjo emping craftsmen in Ngaliyan Village, 16 craftsmen or more than half use channel III, they sell directly to wholesalers. Most of the klatak that is produced by craftsmen comes from the traders themselves. In channel one, 4 craftsmen sell their *emping melinjo* directly to consumers, that show in table 2.

Table 2. Distribution of Respondents in Each Melinjo Emping Marketing Channel

Marketing Channel	Amount	Persentase (%)
Channel I	4	13,33
Channel II	10	33,33
Channel III	16	53,33
Total	30	100

Each marketing agency will incur marketing costs to support marketing activities. Marketing costs incurred in each channel must have differences, this is influenced by the marketing agencies involved (Hardesty & Leff, 2010). Marketing cost that that only channel I does not incur costs due to direct sales of *emping melinjo* to consumers. In channel II the total cost incurred is Rp. 1835, these costs were incurred by collectors, wholesalers, retailers. The cost on this channel is the biggest cost because it involves three marketing agencies. In channel III, the costs incurred by wholesalers are Rp. 1,260 covers the cost of drying, plastic, cardboard, and transportation.

Marketing margin is the difference between the selling price at the craftsman level and the price paid by consumers(Fatmawati & Zulham, 2019). The size of the margin in each marketing channel is influenced by the marketing agency involved and the costs

incurred (Fatmawati & Zulham, 2019). The biggest marketing margin is in channel II of Rp. 20,000, this is due to the number of institutions involved, namely collectors, wholesalers, and retailers. The comparison on channel II and channel III of wholesalers takes a margin of Rp. 5,000 and Rp. 6,000. The highest margin received by a marketing agency is a retailer of Rp. 10,000, because retailers have storage costs and the risk of *emping melinjo* not selling.

Marketing profit is the difference between the marketing margin and the total costs incurred by the marketing agency (Mgale & Yunxian, 2020)(Alfarisi, 2021). Seen from the profit level of craftsmen, channel I has the biggest advantage because it does not involve marketing agencies in the marketing of melinjo chips. The marketing agency that takes the highest profit is the retailer of Rp.9,425, then the smallest profit is obtained by the collector trader of Rp. 3.940.

Table 3. Cost, Margin and Profit Analysis on Each Emping Melinjo Marketing Channel

Description	Channel		
	I (Rp/Kg)	II (Rp/Kg)	III (Rp/Kg)
Purchase price	0	30.000	31.000
Cost	0	1.835	1.260
Profit	0	18.165	4.740
Margin	0	20.000	6.000
Selling price	50.000	50.000	37.000

Channel 1 does not incur any other costs. Because in marketing channel 1 only transactions occur between producers directly to buyers, so only the selling price is received and it is received as income. Channels 2 and 3 receive margins from *emping melinjo* marketing of 20,000 and 6,000, respectively. The biggest gain received on channel 2 is based on the table 3

The largest share of the price received is received by channel 1, because marketing occurs from producers directly to consumers at a price of 50,000. The share of the price received in channel 2 is smaller than the marketing channel 3. The purchase price of consumers in channel 3 is lower so that the share of the price received is 84%. The larger the share received in the marketing channel indicates that each channel can receive a different share depending on the selling price to consumers applied to the seller.

Furthermore, of the three channels, only channel 1 has an EP value below 1 (<1). If the value (EP) of a marketing channel is smaller than the value (EP) of other marketing channels, then the marketing channel is said to have higher marketing efficiency than other marketing channels so that it can be said that the marketing channel of the *emping*

melinjo processing industry is efficient. The longer the agency in the marketing channel, the less efficient it is. Channels 2 and 3 have a value > 1 which indicates inefficient in marketing, this is because the institutions involved in marketing *emping melinjo* are too long.

CONCLUSIONS AND SUGGESTIONS

Based on the results of the study, it can be concluded that the actors involved in marketing *emping melinjo* in Ngaliyan Village, Limpung District, Batang Regency are collectors, wholesalers, agents and retailers. There are 3 patterns of marketing channels, namely marketing channel 1 from producers directly to consumers, channel 2 patterns from producers to collectors, wholesalers, retailers and consumers, and channel 3 from producers to wholesalers and then agents. Marketing efficiency occurs in channel 1, while for channels 2 and 3 it is not efficient.

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