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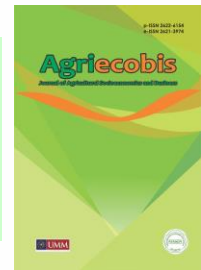
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DAFTAR ISI

Consumers Willingness to Pay and Factors Affecting Organic Vegetable Purchasing Decisions Sholvia Dwi Rahayuningsih, Anas Tain	01-12
Functional Change of Agricultural Land in Tabanan Regency, Bali (Case Study in Subak Jadi, Kediri District) Angeline Yulandari, I Made Sudarma, Gede Mekse Korri Arisena	13-21
Motivation and Perception to Support Purchasing Decisions in “Cafe & Resto Benteng Buah Naga”, Banyuwangi, East Java, Indonesia Yhanis Andita Sari, Gumoyo Mumpuni, Dyah Erni Widyastuti	22-31
The Impact of Credit on Multidimensional Poverty in Rural Areas : A Case Study of the Indonesian Agricultural Sector Tegar Rismanuar Nuryitmawan	32-45
Strategi Pemasaran Bekatul Beras Merah Instan di CV. Pantiboga Natural Food Specialist, Kecamatan Matesih, Kabupaten Karanganyar Widya Ayu Pradani, Mohamad Harisudin, Isti Khomah	46-57
Marketing of Hybrid Corn in Tapenpah Village, Insana District, North Central Timor Regency During the New Habit Adaptation Period Kanisius Siki, Agustinus Nubatonis, Umbu Joka	58-64
Analisis Pemasaran Biji Kopi Robusta Desa Jambuwer Kecamatan Kromengan Kabupaten Malang Moh. Selby Hamzah, Istis Baroh, Harpowo	65-74



Research Article

Consumers Willingness to Pay and Factors Affecting Organic Vegetable Purchasing Decisions

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ABSTRACT

Along with the development of modern society, it is increasingly aware of a healthy lifestyle. This is indicated by the increasing interest in organic products. The research objective was to determine the characteristics of consumers, the value of willingness to pay, and the factors that influence the customers' decision to buy organic vegetables. The research was conducted at CV. Kurnia Kitri Ayu Farm, in Malang. This study used accidental sampling to find the customers who buy organic vegetables at the store. The data collected were then analyzed quantitatively and qualitatively. Quantitative data were analyzed using the Contingent Valuation Method (CVM) and Factor Analysis. Qualitative data was presented in graphs and tables. The results showed that the value of Willingness To Pay (WTP) for organic vegetables per 200 grams as follows: kale was IDR 5,870; green spinach was IDR 5,925; mustard was IDR 6,000. While the WTP was IDR 158,500 (kale), IDR 160,000 (green spinach), and IDR 162,000 (mustard). The factors that influence purchasing are the factors of lifestyle, quality, habit, group reference, comfort, and trust.

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INTRODUCTION

Indonesia has fertile soils and natural conditions that support abundant biodiversity. The tropical climate with sunshine occurs all year round, allowing farmers to grow crops throughout the year. These natural conditions support the cultivation of organic vegetables. Organic vegetables have more benefits than non-organic vegetables, such as a sweeter taste, crunchier texture, longer freshness, and not harmful to health because they do not contain chemical residues (Suprihati, et al., 2015).

A healthy lifestyle increases public awareness of the dangers of chemical substances in food products to be consumed. People are increasingly selective in choosing vegetables, this is an opportunity for the organic vegetable market. This fact is confirmed by Rifai et al., (2008), who stated that organic food in the form of vegetables is now starting to interest people in Indonesia. There are many benefits to be obtained from consuming organic vegetables, such as the carrying capacity of the environment and not harmful to the health of consumers (Novandari, 2011).

The public perception of the price of organic vegetables which is more expensive than non-organic vegetables has been the obstacle they have faced so far (Aufanada et al, 2017). Nevertheless, there are many consumers who are aware of and choose healthy and quality products for consumption. The relatively high price is one of the reasons for the uneven distribution of consumption of organic vegetable products. It is important that organic vegetable producers determine the selling price by assessing the *willingness of consumers to pay* for it. This concept aims to support environmental sustainability, and both parties (producers and consumers) benefit equally. Consumers can get healthy and high-quality products, while the producers get profits.

Increasing public awareness of the need to eat healthy food has led them to be willing to pay high prices for organic vegetables (premium prices). Various previous studies have not examined the amount of WTP and have not found a factor influencing the decision of purchasing organic vegetables in Malang. The novelty of this research lies in the calculation of the WTP of organic vegetables in Malang with the concept of the Contingent Valuation Method, as well as to find the factors that influence the decision to purchase organic vegetables. The relevance of the research is to support an effective pricing strategy that can be applied by organic vegetable businessmen, especially at CV. Kurnia Kitri Ayu Farm. The research aims to determine the WTP of organic vegetables and to identify the factors influencing consumer decisions in purchasing organic vegetables.

METHOD

Time and place

This research was conducted at CV. Kurnia Kitri Ayu Farm, which is located at Jalan Rajawali No. 10, Sukun District, Malang City, East Java. This location includes planting activities (part of the entire garden), administration, and a place of sale. Primary data collection was carried out in April-May 2020.

Variable Measurement

A number of variables used and their indicators are presented in Table 1.

Table 1. Variables and indicators of organic vegetables

No	Indicator	Variable
X ₁	Organic Vegetable Color	Product
X ₂	The freshness of Organic Vegetables	Product
X ₃	Organic Vegetable Packaging	Product
X ₄	Cleanliness of Organic Vegetables	Product
X ₅	Ease of Access	Place
X ₆	Habits of Consuming	Culture
X ₇	Reference Group	Social
X ₈	Family	Social
X ₉	Recognition of Social Status	Social
X ₁₀	Lifestyle	Personal
X ₁₁	Self Appreciation	Personal
X ₁₂	Perception	Psychological
X ₁₃	Learning	Psychological
X ₁₄	Motivation	Psychological
X ₁₅	Consumer Trust	Psychological
X ₁₆	Providing Recommendations	Psychological

source: Primary data process (2020)

Organic vegetable indicators in this study were measured by a Likert scale. According to Sugiyono (2016) the Likert scale can be used to measure the product, place, culture, social, and psychology of a person or group of people concerning social phenomena. In this case, the social phenomenon is related to the purchase of organic vegetables. The research tool that uses a Likert scale can be made in the form of a checklist. The measured variable is translated into a variable indicator. The indicator is then used as a starting point for arranging instrument items which can be in the form of statements or questions. Table 2 presents the weighted scores for the Likert Scale.

Table 2. Estimated weight on the Likert Scale

Information	Score
Strongly Agree (SA)	5
Agree (A)	4
Neutral (N)	3
Disagree (D)	2
Strongly Disagree (SD)	1

Source: Sugiyono (2016)

Sampling technique

As a sampling technique, *accidental sampling* was used, which is a technique of determining the sample by chance. Consumers who had a chance to meet with researchers and made at least 2 purchases can be used as samples (Sugiyono, 2016). The population in this study were consumers of organic vegetables at CV. Kurnia Kitri Ayu Farm whose numbers were not yet known. Therefore, the formula used by Aufanada et al., (2017). The number of samples was determined as the number of indicators multiplied by 5 to 10. The study used 16 indicators so that the representative sample in this study was $16 \times 5 = 80$ respondents.

Referring to the theoretical and calculation formulas, the number of samples in this study was 80 respondents. A total of 80 respondents divided organic vegetables into three types, with 27 respondents for each type of vegetables.

Data collection technique

The following data collection methods are used:

1. Direct observations made by researchers at CV. Kurnia Kitri Ayu Farm
2. Interviews were conducted for direct communication with consumers of organic vegetables, especially regarding the value of willingness to pay and factors influencing the decision to buy organic vegetables.
3. Documentation, namely taking pictures of research objects, specifically CV. Kurnia Kitri Ayu Farm as supporting research information.

The data and information obtained were analyzed quantitatively and qualitatively. Quantitative data is processed first using *Microsoft Excel* tools and *Statistical Product and Service Solution* (SPSS). The results are displayed in the form of tables, graphs, and SPSS output which are then descriptively analyzed and interpreted to discuss the results. The qualitative data obtained is presented in descriptive form using charts and tables.

Data analysis

Quantitative Analysis

Quantitative analysis is used to determine the value of the *Willingness To Pay* (WTP) given by consumers to get organic vegetables. The calculation is carried out to determine the maximum price that consumers are willing to pay for organic vegetables. The calculation of quantitative analysis involves the value provided by consumers and the maximum average value is calculated using the *Contingent Valuation Method* (CVM).

Contingent Valuation Method (CVM) Analysis

According to Fauzi, (2010), the CVM analysis procedure in this study is as follows:

- a. Create a hypothetical market.

A hypothetical market illustrates an illustration of an event in the event of a future price change. This research illustrates the importance of consuming organic vegetables because people are health conscious. The shift from consuming non-organic vegetables to organic vegetables, concern with body health, lifestyle, and knowledge of organic vegetables has made consumers buy organic vegetables without considering the quoted price.

- b. Get auction value

The auction value is carried out by the survey stage, either through direct surveys, telephone interviews, or by mail. These three methods using direct surveys will provide better results. This study aimed to obtain the maximum value of the respondents' Willingness to Pay for organic vegetables by using an Open-Ended

Question method. Respondents are given the option to indicate the monetary value (IDR) for purchasing organic vegetables.

c. Calculate the average WTP

The average value of WTP is calculated using the following equation:

$$EWTP = \sum_{i=1}^n W_i (P_{fi}) \dots \dots \dots (1)$$

Where:

EWTP = Estimated average WTP (IDR)

W_i = value of the WTP-i (IDR)

P_{fi} = Relative frequency of the WTP-i class

N = Number of WTP classes

I = Respondent I who is willing to pay for organic vegetables.

d. Estimate the bid curve

Curve estimates will be obtained by aggregating the WTP value as a dependent variable with multiple independent variables using the equation:

$$WTP = f(X_1, \dots, X_n) \dots \dots \dots (2)$$

e. Aggregate data on total WTP

The aggregation of total WTP data is obtained using the average WTP value, which is converted to the entire population. Consider the total WTP using the following equation:

$$TWTP = EWTP \cdot P \dots \dots \dots (3)$$

Where :

TWTP = Total WTP (IDR)

EWTP = Average WTP of respondents (IDR)

P = Population (people)

Factor Analysis

Factor analysis is a multivariate statistical method attempting to explain the relationship between a set of variables that are independent of one another so that one or more sets of variables that are less than the initial variable can be made.

The statistics related to factor analysis are:

a. Kaiser-Meyer-Olkin (KMO) Measure Of Sampling Adequacy (MSA), is an index used to examine the accuracy of factor analysis. A high value between 0.5 - 1.0 signifies the factor analysis is correct, if less than 0.5, the factor analysis is said to be incorrect. The KMO test aims to determine whether all the collected data is sufficient to factor. The hypothesis of KMO is as follows:

Hypothesis:

H0: The amount of data is sufficient to factor

H1: The amount of data is not enough to factor

Test statistics:

$$KMO = \frac{\sum_{i=1}^p \sum_{j=1}^p r_{ij}^2}{\sum_{i=1}^p r_{ij}^2 + \sum_{i=1}^p \sum_{j=1}^p a_{ij}^2}$$

$i = 1, 2, 3, \dots, p$ dan $j = 1, 2, \dots, p$

r_{ij} = Correlation coefficient between variables i and j

a_{ij} = Coefficient of partial correlation between variables i and j

If the KMO value is greater than 0.5, then H0 is accepted, which means that the amount of data has been sufficiently factored.

b. Bartlett's of sphericity is a statistical test used to test the hypothesis that variables are *uncorrelated* in the population. In other words, the population correlation matrix is an *identity matrix*, where each variable is perfectly correlated with itself with ($r = 1$) but completely uncorrelated with the others ($r = 0$).

The Bartlett test aims to determine whether there is a relationship between variables in a multivariate case. If the variables X_1, X_2, \dots, X_p are interdependent, then the correlation matrix between variables is the same as the identity matrix.

c. Communality is the number of variants contributed by a variable with all other variables in the analysis. The variable is considered capable of explaining the factor if the Extraction value is > 0.50 . It can also be called the proportion or part of the variant described by the *common factor* or the size of the factor's contribution to the variance of all variables.

The *Scree Plot* is a plot of the eigenvalues as a *vertical axis* and the number of factors as a *flat axis*, to determine the number of factors that can be drawn (*factor extraction*).

RESULTS AND DISCUSSION

Analysis of consumers' Willingness To Pay for Organic Vegetables

The initial stage carried out is searching for respondent information through a questionnaire to support the concept of WTP in CV. Kurnia Kitri Ayu Farm, Malang. If the respondent meets the criteria, it simplifies the analysis of the WTP. Table 3 presents *Willingness to Pay* and *Unwilling to Pay* organic vegetables in CV. Kurnia Kitri Ayu Farm, Malang.

Table 3. Willingness to Pay for Organic Vegetables

No	Statement	Number of respondents	Percentage
1	Willing to	68	83.9%
2	Not Willing	13	16.1%
	Amount	81	100%

Source: Primary Data Process (2020)

Table 3 shows that 68 people (83.9%) of respondents are willing to pay, this is a very large amount compared to those who are not willing to pay. Respondents are willing to pay more because they are concerned with health benefits. This finding is consistent with data from Rofiatin & Bariska, (2018), who stated the desire for a good impact on organic vegetables for health, disease treatment, and better quality than non-organic vegetables. Respondents who are not willing to pay because they believe that higher prices will affect the purchasing power of consumers, therefore, switch to the consumption of non-organic vegetables. These results also confirm that the price of organic vegetables is higher than non-organic ones, Yunus et al., (2019) and Fajriya, (2020). AUFANADA et al., (2017) also stated that the main reason respondents are not willing to pay is the lifestyle of consumers that combines the consumption of organic and non-organic vegetables. Consumers are still considering the price, if the price of organic vegetables is too high and purchasing power is not affordable, then consumers decide to consume non-organic vegetables.

The following is the procedure for determining the Willingness to Pay value:

1. Build a hypothetical market

The respondents were provided with information on organic vegetable products that generated increased community interest due to their awareness of healthy, safe, and nutritious lifestyles. Therefore, the respondent gets an overview of the situation in question. This is done so that respondents can determine the amount of money they are willing to pay.

2. Obtain auction value

The value of WTP (*Willingness To Pay*) was obtained from respondents using the *Open-Ended Question* method regarding the maximum WTP that consumers are willing to pay. It is noted that no proposal value is indicated, therefore the respondent has the freedom to provide the value to be paid.

3. The average value of WTP

After completing the survey, the next step is to calculate the average WTP for each person. This value is calculated based on the auction value obtained at the stage of determining the amount of the WTP value. This calculation is usually based on the *mean* and *medium* values. The estimated average value of the respondent's WTP is calculated based on the value of the WTP distribution given by the respondent who is willing to pay a certain price. Table 4 shows the average value of willingness to pay.

Table 4. WTP Average Value

No	Commodities	Unit (gr)	Initial Price (IDR)	WTP Value (IDR)
1	Kale	200	5,000	5,870
2	Green Spinach	200	5,000	5,925
3	Mustard	200	5,000	6,000

Source: Primary Data Process (2020)

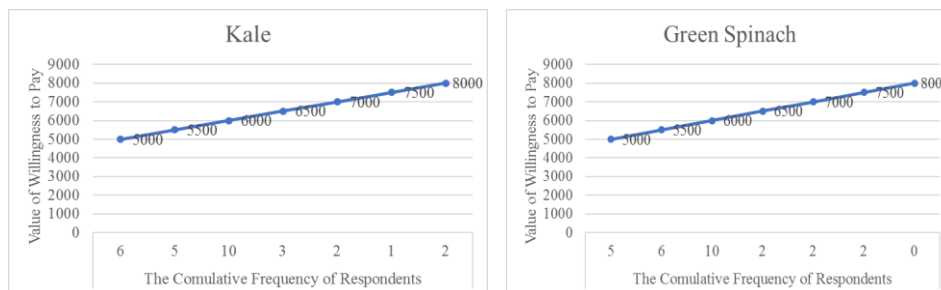
Based on Table 4, organic vegetables obtained the WTP value per 200 grams respectively for kale, green spinach, and mustard of IDR 5,870, IDR 5,925, and IDR 6,000. This cost is higher than the sale price offered for all types of vegetables, which is IDR 5,000 per 200 grams. The average value indicates that there is a consumer surplus because the WTP value desired by the respondent is higher than the WTP range value, namely IDR 5,870-IDR 6,000. Although the price is given by CV. Kurnia Kitri Ayu Farm is already high, 67 respondents are still willing to pay more for organic vegetables. This shows that respondents in charge of organic vegetables are consumers who are more concerned about the quality and benefits of organic vegetables.

The results of this study are consistent with data from Yunus et al., (2019), who stated that the initial broccoli price of IDR 6,000 per 200 grams resulted in a higher WTP value of IDR 8,300 per 200 grams. Also for other vegetables, namely kale, with an initial price of IDR 5,500 per 200 grams, obtaining a WTP value of IDR 5,700 per 200 grams, carrots at an initial price of IDR 9,300 per 500 grams, obtaining a WTP value of IDR 11,125, pakcoy, the initial price of IDR 5,968, mustard, the initial price of IDR 5,500 per 200 grams, gets a WTP value of Rp. 5,687 and spinach, the initial price of IDR 5,500 per 200 grams, gets a WTP value of IDR 5,750.

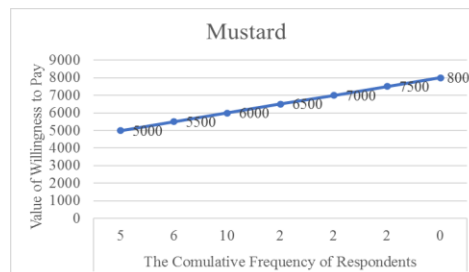
This result is also confirmed by Priambodo & Najib, (2016) estimating that the average WTP for cabbage vegetables is IDR 18,733 per kilogram, lettuce IDR 30,048 per kilogram, broccoli IDR 40,250 per kilogram, pakcoy IDR 24,368 per kilogram, and IDR 19,820 per kilogram of carrots.

4. The auction curve

The respondent's WTP curve was formed using the cumulative frequency of the number of respondents who chose the WTP value. This curve relationship illustrates the value of WTP who are willing to be paid by the number of respondents who are willing to pay at a certain WTP value. It is assumed that respondents who are willing to pay a high price are definitely willing to pay a lower price than that indicated.



Graph 1. Estimated WTP Curve of Kale **Graph 2.** Estimated WTP Curve of Green Spinach



Graph 3. Estimation WTP curve of Mustard

Graph 3 shows that the higher the value obtained, the fewer respondents are willing to pay for organic vegetables. This shows that the consumer's capacity to buy is less if the quoted price is higher. Increasing the price of organic vegetables too high will lead to a decrease in the number of consumers. For Kale, 6 respondents gave a WTP value of IDR 5,000 and 2 respondents gave a WTP value of IDR 8,000, with this the

WTP value for kale was IDR 5,870. The difference in the quoted price is IDR 5,000 and getting a WTP value of IDR 5,870, followed by a surplus of IDR 870. 5 respondents estimated the WTP value of the green spinach of IDR 5,000 and 2 respondents gave a WTP value of IDR 7,500, while the WTP value of kale is IDR 5,925. The difference in the quoted price is IDR 5,000 and when the WTP value of IDR 5,925 is obtained, the surplus is IDR 925. Whereas for the mustard, 6 respondents gave a WTP value of IDR 5,000 and 1 respondent gave a WTP value of IDR 7,500, hereby the WTP value in mustard was IDR 6,000. The quoted price is IDR 5,000 and the WTP value is IDR 6,000, followed by a surplus of IDR 1,000.

5. Aggregate data and total WTP value

The final stage of the CVM method is to aggregate the average auctions obtained in the third stage. This process involves converting the sample mean data to the average of the entire population.

Table 5. Table of the total value of WTP

No	Commodities	Total Value of WTP (IDR)
1	Kale	158,500
2	Green Spinach	160,000
3	Mustard	162,000

Source: Primary Data Process (2020)

The total value of WTP calculated using the number of respondents who are willing to pay, the TWTP (Total Willingness to Pay) value is IDR 158,500 for kale commodity, IDR 160,000 for green spinach commodity, and IDR 162,000 for mustard commodity.

Analysis of Factors Affecting the Organic Vegetable Purchase Decision

Factor analysis is used to find factors that can explain the relationship between the investigated independent variables. The data used in this analysis is the result of a questionnaire completed by respondents at CV. Kurnia Kitri Ayu Farm. The variables used in this analysis were the color of organic vegetables (X_1), freshness of organic vegetables (X_2), packaging of organic vegetables (X_3), cleanliness of organic vegetables (X_4), ease of access (X_5), consumption habits (X_6), group reference (X_7), family (X_8), recognition of social status (X_9), lifestyle (X_{10}), self-esteem (X_{11}), perception (X_{12}), learning (X_{13}), motivation (X_{14}), consumer trust (X_{15}), provide recommendations (X_{16}).

Factor analysis using the KMO table and Bartlett's Test is beneficial for determining the feasibility of a variable by looking at the KMO MSA (Kaiser-Mayer-Oikin Measure of Sampling Adequacy) value. If the KMO value is greater than 0.05, the factor analysis technique can be continued.

Table 6. KMO and Bartlett's Test Results

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.714
Bartlett's Test of Sphericity	Approx. Chi-Square	346.977
	Df	120
	Sig.	0.000

Source: Primary Data Process (2020)

Table 6 shows the KMO MSA value of $0.714 > 0.05$ and *Bartlett's Test of Sphericity (Sig.)* Value of $0.000 < 0.05$. Thus, it can be said that the factor analysis can be continued because all variables influence the willingness to pay for organic vegetables. The next step is the analysis used to determine which variables should be excluded. Variables that MSA value is below 0.5 of the 16 variables should be excluded. In the Anti Image Matrice attachment, in the Anti Image Correlation, the variable value is the number marked with a (diagonal direction from top left to bottom right). In the output results, all of the variables were found to have MSA values above 0.5, so there were no variables to exclude.

The next step in factor analysis is factoring or extracting all existing variables so that fewer factors are generated than all variables. This study uses a method in the extraction process, namely *principal component analysis* (PCA), which in this process produces the value of *commonalities*, the value of the generated *extraction* shows the percentage of variance of a variable that can be explained based on the formed factors and shows how much influence the variable has on the willingness to pay for organic vegetables at CV. Kurnia Kitri Ayu Farm.

Table 7 shows the *commonalities* of the 16 variables, each greater than 0.5. Overall, this means that all the variables used are closely related to the generated factors. The variable with the highest value in this study is the cleanliness variable of organic vegetables, which is equal to 0.799. This means that 79.9 percent of the results of consumer interviews are interested in the cleanliness of organic vegetables in terms of the physical appearance of the vegetables sold before determining which vegetables to buy.

Table 7. Comunalities

	Variable	Extraction
X ₄	Cleanliness of Organic Vegetables	0.799
X ₂	The Freshness of Organic Vegetables	0.733
X ₁₂	Perception	0.726
X ₁₀	Lifestyle	0.702
X ₁₃	Learning	0.674
X ₈	Family	0.667
X ₁₁	Self-Esteem	0.661
X ₅	Ease of Access	0.658
X ₁₄	Consumer Trust	0.644
X ₇	Reference Group	0.625
X ₉	Recognition of Social Status	0.610
X ₆	Habit of Consuming	0.604
X ₁₆	Providing Recommendations	0.593
X ₁	Organic Vegetable Color	0.576
X ₃	Organic Vegetable Packaging	0.563
X ₁₅	Motivation	0.518

Source: Primary Data Process (2020)

Output Total Variance Explained, five factors are formed based on the eigenvalue value greater than one. The first factor has an *eigenvalue* of 3,776, the second factor has an *eigenvalue* of 2,195, the third factor has an eigenvalue of 1,762, the fourth factor has an eigenvalue of 1,184, and the fifth factor has an eigenvalue of 1,036. All the factors formed have a total *percentage of the variance* of 62,207, which means that 62 percent of the 16 variables can be explained by the 5 formed factors.

Formed Factors Influencing Organic Vegetable Purchase Decisions

The *rotated component matrix* table (appendix) shows the distribution of the 16 variables. These variables have been divided into the factors that are formed based on the value of the loading factor after which the rotation process is carried out. The loading value shows the magnitude of the correlation between the original variable and the formed factors. This study led to the identification of five main factors that influence the decision to purchase organic vegetables at CV. Kurnia Kitri Ayu Farm. The next step is to set the factors that are formed in the factor analysis based on the variables that make up these variables.

Table 8. The results of dividing the variables into factors

Factor Name	Origin variable	Loading Value	Eigenvalue score
Lifestyle	Family	0.793	3.776
	Lifestyle	0.786	
	Appreciation	0.783	
	Learning	0.551	
Quality	Cleanliness of Organic Vegetables	0.877	2.195
	The Freshness of Organic vegetables	0.813	
	Organic Vegetable Packaging	0.560	
	Organic Vegetable Color	0.540	
Habit	Habit of Consuming	0.741	1.762
	Perception	0.584	
	Motivation	0.545	
Reference	Reference Group	0.769	1.184
	Providing Recommendations	0.514	
	Recognition of Social Status	0.512	
Trust and ease	Consumer Trust	0.722	1.036
	Ease of Access	0.664	

Source: Primary Data Process (2020)

1. Lifestyle factors

The first factor, called the lifestyle factor, has four variables, namely: family, lifestyle, appreciation, and learning. The variable with the highest *loading* factor is the family variable with a value of 0.793. According to Apriyani & Saty, (2013), lifestyle is a way of life, which means activities, interests, and opinions of a person. Individual lifestyles such as healthy lifestyles greatly influence consumer decisions in buying organic vegetables. According to Devi & Hartono, (2016), if the intensity is related to families is high, the decision to buy organic vegetables also increases, on the other hand, if the intensity is low, the decision to buy organic vegetables will decrease. This is consistent with Susanti et al., (2018), that family members are the primary reference group that has the greatest influence on purchasing as they are closest to the individual. Lifestyle is influential in determining the purchase of organic vegetables because consumers have a healthy life expectancy by consuming organic vegetables. This agrees with Suryoko, (2016) that the lifestyle of consumers affects purchasing decisions.

The lifestyle factor with the least *loading* value is in the learning variable with a value of 0.551. According to Kotler & Armstrong (2008), learning occurs through the interaction of encouragement, stimulation, signs, responses, and reinforcement. This shows that there are still many consumers who unaware of organic vegetables, but the owner provides education (stimulation) to consumers about organic vegetables which encourages consumers to give a positive response in the form of consuming organic vegetables.

2. Quality Factors

The second factor is called the quality factor, where it has four variables, namely the cleanliness of organic vegetables, the freshness of organic vegetables, packaging of organic vegetables, and color of organic vegetables. The variable with the *highest loading* is the organic vegetable cleanliness variable with a value of 0.877. This shows that consumers pay attention to the cleanliness of the organic vegetables they buy. According to Astuti et al., (2019), organic vegetables with a good appearance will make consumers loyal to the organic vegetables that will be purchased because consumers do not see the price, but the quality and benefits they receive. According to Anom Yuarini et al., (2015), the variable hygiene is one of the factors that influence respondents in making purchases. For the level of cleanliness at CV. Kurnia Kitri Ayu Farm, vegetables after harvesting is washed, afterward sorted, and packaged to preserve the quality of the vegetables. According to Hasan et al., (2019), stated that consumers prefer to buy organic vegetables that have a good appearance, such as leaves without holes.

The quality factor with the *least loading* value is found in the organic vegetable color variable with a value of 0.540. According to Anggiasari et al., (2016), if the harvest exceeds the harvest limit, the leaves will turn yellowish and not fresh, even though consumers expect the color of organic vegetables to be of good quality. This does not happen at CV. Kurnia Kitri Ayu Farm because harvesting is carried out on time so the quality of the organic vegetables obtained is maintained, and consumers continue to believe in the quality of the vegetables sold.

3. Habitual Factors

The third factor is called the habitual factor by having three variables consisting of consumption habits, perceptions, and motivation. The variable that has the *greatest loading* value is the habit of consuming a variable with a value of 0.741. According to Devi & Hartono, (2016), consumption and buying habits at the selected location, as well as health maintenance, are among the factors that encourage consumers to decide to buy organic vegetables. This shows that consumers of CV. Kurnia Kitri Ayu Farm have the habit of consuming organic vegetables to maintain health. The habit factor with the least loading value is the Motivation variable with a loading value of 0.545. According to Pardian et al., (2017), the motivation of consuming organic vegetables is because they are healthier and of higher quality. Many consumers have started to have high perceptions and interests in organic vegetables. According to Vista et al., (2020), the higher the motivation of consumers, the higher the decision to buy organic vegetables compared to the decision not to buy.

4. Reference Factors

The fourth factor, called the reference factor, has three variables, consisting of a reference group providing advice and recognition of social status. The variable that has the highest loading is the reference group variable with a value of 0.769. According to Dasipah et al., (2010), the reference group is one of the factors that influence consumers as it can provide direct information about the benefits, prices, and advantages of organic vegetable products. Many consumers of CV. Kurnia Kitri Ayu Farm receive recommendations on prices, benefits, and places of sale from the environment and the community they follow. This makes consumers buy organic vegetables at CV. Kurnia Kitri Ayu Farm without hesitation. These results are supported by Chrysanthini et al., (2018), that the most influential sources of information in choosing organic vegetables are friends, shared information, and the internet. The reference factor with the least loading value is the social status recognition variable with a value of 0.512. The results in the field show that not all consumers buy organic vegetables at CV. Kurnia Kitri Ayu Farm to gain social status recognition because they buy for the benefits of organic vegetables and are in an accessible location.

5. Trust and Convenience Factor

The fifth factor is called the trust and convenience factor. It has two variables, namely consumer trust, and ease of access. The variable with the highest loading is the consumer trust variable with a value of 0.722. According to Rifai et al., (2008), consumer confidence in buying organic vegetables is based on their health benefits, so that if the quoted price rises, consumers will continue to buy. Many consumers of CV. Kurnia Kitri Ayu Farm still buy vegetables even though the quoted price increased, although some consumers are reluctant to buy if the price rises because organic vegetables are not the main priority for consuming vegetables.

The trust and convenience factor which have the least loading is the ease of access variable with a value of 0.664. According to Ratnawati et al., (2017) and Novanda, (2020), ease of access is a consideration in purchasing organic vegetables because it makes it easier for consumers to get the point of sale. Many consumers of CV. Kurnia Kitri Ayu Farm come from the neighborhood where they are sold, consequently, many consumers are reluctant to move elsewhere, even though the price of vegetables is rising.

CONCLUSION

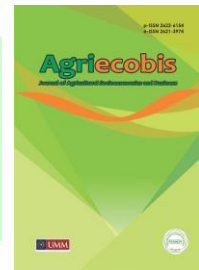
1. The majority of the CV. Kurnia Kitri Ayu Farm consumers are females between the age of 37 - 46. On average, one family can consist of 4 people. The latest education of the consumers are high school and the income is Rp. 3.000.000 to Rp. 5.000.000 on average.
2. As many as 68 consumers are willing to pay more for organic vegetables. The maximum value of Willingness To Pay for organic vegetables such as kale is IDR 5,870 per 200 grams, green spinach IDR 5,929 per 200 grams, and mustard IDR 6,000 per 200 grams.
3. Five factors influencing the decision to purchase organic vegetables, namely lifestyle factors with an *eigenvalue* of 3.776, quality factors with an *eigenvalue* of 2.195, habit factors with an *eigenvalue* of 1.762, a reference factor with an *eigenvalue* of 1.184 and convenience, and trust factors with an *eigenvalue* of 1.036.

The suggested advice is that CV. Kurnia Kitri Ayu Farm can increase the selling price of organic kale vegetables up to IDR 5,870 per 200 grams, green spinach up to IDR 5,929 per 200 grams, and mustard up to IDR 6,000 per 200 grams.

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Research Article

Functional Change of Agricultural Land in Tabanan Regency, Bali (Case Study in Subak Jadi, Kediri District)

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ABSTRACT

Tabanan Regency as a rice barn in Bali has also experienced land conversion, particularly rice fields area. The rapid financial expansion requires the development of various infrastructures so that the demand for agricultural land is more enormous. Kediri sub-district is one of the regions that experienced the conversion of agricultural area to non-agricultural which is adequately high in Tabanan Regency. The purpose of this study is to determine the development of the land conversation in the Tabanan Region, differences in farmer's income that have done the land conversion and those who have not done it, and the components that influence land conversion. The sampling technique is taken by proportional sampling with 40 people. The analysis techniques used are trend analysis, average difference test analysis, and logistic regression models. The result of the study concludes that the development of agricultural land conversion in Tabanan Regions is proceeding to extend. Based on the results of the t-test there is no significant difference between the average income of farmers who have done the land conversion and those who have not. Factors that influence the land conversion at the agricultural level are labor, number of dependents, irrigation systems, and surface area.

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INTRODUCTION

Time is changing and this forces society to boost its productivity in the field of infrastructures, economy, and intellectuality. The need for land as a platform for every community activity will continue to increase in line with the development of population and economic growth. This leads to competition in land use and a shift in land use from less profitable to more profitable activities. Land use activities in the agricultural sector are often threatened because they are considered less profitable when compared to other economic activities so that the conversion of agricultural land to other uses is difficult to prevent. Competition in land use is prevalent in various parts of Indonesia, one of which is Tabanan Regency as the highest rice provider for the Province of Bali, which continues to change the function of agricultural land, especially rice fields.

The Tabanan Regency is one of nine regencies/cities with an area of 839.33 km² or 14.90 percent of the area of the province of Bali (Tabanan Regency Office, 2019). As much as 28 percent of the land area in Tabanan Regency is rice fields so that Tabanan Regency is known as an agricultural area. Agriculture in

Tabanan can be said to be the driving force of the regional economy because most of the livelihoods and land use in the Tabanan region are still dominated by agriculture in a broad sense.

The land is a very important resource, both for farmers and agricultural development. The success of the food security program is determined by the availability of agricultural land to carry out all agricultural activities in producing the food needed by every human being daily. But in reality, the available land for food production is very limited and even continues to decline every year.

In general, the rice field area in Tabanan Regency is decreasing every year. From 2014 to 2015, according to the data of the Tabanan Regency office in 2019, the area of rice fields from 21,962 hectares (ha) to 21,714 ha decreased by 248 ha. The depreciation of the rice fields continued until 2018, the highest shrinkage occurred, which was 493 Ha, compared with land area earlier in 2017 from 21,089 ha to 20,596 ha. The total number of rice fields that decreased in a period of 5 years from 2014 to 2018 counted as 1366 ha. The decline in agricultural land, especially rice fields, occurred in all sub-districts in Tabanan Regency from 2014 to 2018. The highest conversion of agricultural to non-agricultural land occurred in Kediri Subdistrict, with the shrinkage of rice fields up to 113 ha and an increase in non-agricultural land covering an area of 127 ha.

The fast economic growth in the Tabanan Regency requires the development of various infrastructures such as housing, roads, industry, offices, and other buildings so that the demand for existing agricultural land is quite large. As a result, a lot of agricultural land has changed its function to meet these needs. In addition, land conversion can also occur due to a lack of incentives or government attention in the agricultural sector, so that people start to switch to other sectors.

The development of the Tabanan Regency in terms of population, with a population of 445,700 registered until 2019, implies that the conversion of agricultural land is quite high. This increase in population was caused by uncontrolled population growth and population movement. In addition, economic activity, especially in the tourism sector, which continues to develop is also a factor in the occurrence of changes in land use. The tourism sector is a fairly high foreign exchange contributor for the Province of Bali, including Tabanan Regency. Supporting natural conditions and promising investment attracts investors to invest in hotels and other tourism services. Along with the development of tourism, there is a phenomenon, namely the reduction of rice fields due to land conversion in Bali, which is an average of 750 ha/year (Windia, et al., 2016). This is part of the challenges/threats to the existence of subak (water management (irrigation) system for rice fields on Bali island) which are directly or indirectly caused by the development of tourism in Bali (Windia, 2012).

The limited available land in an area will increase the value of land in the area, which can disrupt the balance between land value and certain land uses. As a result, there arises the desire of the landowner to change the use of his land to suit the price level of the land. High land prices make farmers tempted to transfer their agricultural land ownership to investors. This was due to an economic motive that pressured farmers so that eventually land conversion occurred.

Based on these issues, it is necessary to conduct research on "Changes of Function of Agricultural Land in Tabanan Regency (Case Study in Subak Jadi, Kediri District)". This study aims to determine the development and projection of the conversion of agricultural land in Tabanan Regency, the differences in the income of farmers that change and do not change the function of the land, as well as the factors that affect the conversion of land functions at the farm level.

METHOD

This research was conducted in Tabanan Regency. The choice of the research location was carried out purposively (deliberately) because of the consideration that Tabanan Regency is a district that has experienced the highest conversion of agricultural land in Bali Province according to the SI (Statistics Indonesia) of Bali Province in 2019. In addition, Tabanan is also the largest rice producer in Bali and most of its residents earn their livelihood as farmers. The case study was conducted in Subak Jadi, Banjar Anyar Village, Kediri District. This location was chosen as Kediri Subdistrict had the highest conversion of agricultural land to non-agricultural land in Tabanan Regency. Subak Jadi is one of the subaks in the Banjar Anyar Village with the highest conversion of rice fields in Kediri District (BPN Tabanan, 2019). Data collection was carried out using interview and documentation methods. Sources of data used in this study are primary and secondary data.

This study involved 78 landowners in Subak Jadi. Riduwan and Akdon (2009) state that if the population size is approximately 100, the sample size is at least 50 percent of the population size. If the population size is more than 1000, the sample size is at least 15 percent. Based on this opinion, 40 farmers were recruited in this study. The sampling technique in this study is probability sampling using proportional sampling. The number of sample members is carried out by proportional sampling with the proportional allocation formula.

N = Population Class / Total Population x Number of Samples Specified

Then the number of sample members obtained for farmers who change land functions and who do not change land functions are as follows:

1. Farmers who change the function of land
 $47/78 \times 40 = 24$ people
2. Farmers who do not change land functions
 $31/78 \times 40 = 16$ people

The data analysis in this study is detailed based on the research objectives, as follows:

The first objective analysis is to determine the rate of conversion of agricultural land functions and *projections* of conversion of agricultural land functions in the next few years. According to Sutani (2009) in Puspasari (2012), in calculating the rate of conversion of agricultural land functions, the land function conversion equation is used. The rate of partial land-use change can be explained as follows:

$$V = (L_t - L_{(t-1)}) / L_{(t-1)} \times 100\%$$

Where:

V = Rate of land conversion (%)

L_t = Land area in year t (ha)

L_{t-1} = Land area before t (ha)

The projection of the conversion of agricultural land to non-agricultural land in the next few years uses the Trend Analysis, forecasting model. The use of time series analysis for the purpose of this study means the use of past data as a component for making future projections (Gujarati and Porter, 2009).

The second objective analysis is to determine the difference in income of farmers who change and do not change land functions using the two-mean difference approach. This test is performed using the t-test to test the sample data as a whole. The t-test equation used is as follows:

$$t = (X_1 - X_2) / \sqrt{((n_1 - 1)S_1^2 + (n_2 - 1)S_2^2) / (n_1 + n_2 - 2) \times (1/n_1 + 1/n_2)}$$

Where:

X_1 = The average income of farmers who do not change the function of land

X_2 = The average income of farmers who change the function of land

n_1 = Number of respondents who do not change land functions

n_2 = Number of respondents who change land functions

s_1 = Standard deviation that does not change land functions

s_2 = Standard deviation which changes land function

Hypothesis:

$H_0 = X_1 = X_2$

$H_1 = X_1 \neq X_2$

If $t_{\text{count}} < t_{\text{table}}$, then H_0 is accepted and H_1 is rejected, which means there is no difference in income between farmers who do not change land functions and farmers who change land functions. Meanwhile, if $t_{\text{count}} > t_{\text{table}}$, then H_0 is rejected and H_1 is accepted, which means that there is a difference in the income of farmers who do not change land functions and farmers who change land functions.

The third objective analysis is to determine the factors that affect the conversion of agricultural land at the farm level by using logistic regression analysis. The logistic regression model equation to determine the factors that affect land conversion at the farm level is as follows:

$$\ln \left(\frac{P_i}{1 - P_i} \right) = Z_i = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

Where:

Z = Opportunity for land conversion (1) and not land conversion (0)

α = Intercept

β_i = Regression coefficient

X_1 = Labor Factor

X_2 = Farming Experience Factor

X_3 = Proportion Factor of Farming Income

X_4 = Factor Number of Dependent Farmers

X_5 = Irrigation Network Factor

X_6 = Farmer Ownership Area Factor

ε = Error term / Residual

Table 1. Variables and Research Measurement Indicators

No	Variable	Indicator	Measuring scale
1	The decision of the farmer to change the function of the land (Y)	Farmers' decisions are measured by 1 for farmers who change land functions, and 0 for farmers who do not change land functions	Nominal
2	Labor (X ₁)	Labor is measured by 1 when labor is hard to find and if labor is not difficult to find	Ordinal
3	Farming experience (X ₂)	The length of time a person is engaged in farming (years)	Ratio
4	The proportion of income from farming (X ₃)	Percentage of farm income compared to total farmer income	Ratio
5	Number of dependents of farmers (X ₄)	The number of people that the farmer (person) must bear his needs	Ratio
6	Irrigation network (X ₅)	The irrigation network is measured 1 for farmers who experience irrigation network problems and 0 for those who do not	Ordinal
7	Farmer's land area (X ₆)	The area of land owned by the respondent farmer (square meters)	Ratio

Source: Primary Data

RESULTS AND DISCUSSION

Rate and Projection of Change of Function of Agricultural Land in Tabanan Regency

The conversion of agricultural land to non-agricultural land in Tabanan Regency continues to occur every year, especially in rice fields. These land changes generally become land for settlement, industry, as well as facilities and infrastructure. The rate of land conversion can be seen in Table 2.

Table 2. Area and Rate of Transfer of Functions of Rice Fields in Tabanan Regency, 2011-2018

Year	Rice area (Ha)	Converted Rice Area	Land conversion rate (%)
2011	22,435	-	-
2012	22,388	47	0.21
2013	22,184	204	0.91
2014	21,962	222	1.00
2015	21,714	248	1.13
2016	21,452	262	1.21
2017	21,089	363	1.69
2018	20,596	493	2.34

Source: Agriculture Office of Tabanan Regency, 2019

Table 2 shows that the number of rice fields in the Tabanan Regency has changed. The rate of conversion of agricultural land to non-agricultural functions has tended to increase annually over the past eight years from 2011 to 2018. The decrease in rice field area that occurred during that period reached 8.20 percent with a reduced total land area of 1,839 ha with an average rate of conversion of 1.17 percent annually.

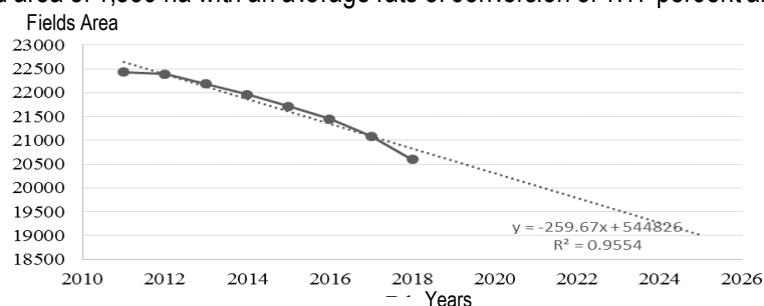


Figure 1. Rate of Rice Field Area in Tabanan Regency in 2011-2018

Source: Tabanan Regency Agriculture Service 202

Figure 1 shows that the graph of the rice field area in Tabanan Regency decreases every year. By looking at the trend of data movement in the previous period, a model is formed which can then be used to forecast the future conversion of agricultural land in Tabanan Regency. The dotted line in Figure (1) is a linear line from trend analysis so the following equation is obtained:

$$Y = 544.826 - 259,67 x$$

The rate of conversion of agricultural land in the next few years can be predicted using this equation. The projection of the rice field area in Tabanan Regency in 2019 - 2025 can be seen in Table 3.

Table 3. Projection of Rice Field Area in Tabanan Regency in 2019-2025

Year	Rice area (Ha)	Converted Rice Area	Land conversion rate (%)
2019	20,552	44	0.21%
2020	20,293	259	1.26%
2021	20,033	260	1.28%
2022	19,773	260	1.30%
2023	19,514	259	1.31%
2024	19,254	260	1.33%
2025	18,994	260	1.35%

Source: Secondary Data (processed)

Based on Table 3, the projection of the development of the rate of conversion of agricultural land in Tabanan Regency has increased, so that at the end of the year the forecast for the total land conversion in 2025 will reach 1,602 ha, where the remaining rice fields are 18,994 ha. The rate of land conversion that occurred during this period was 1.15 percent annually. Certainly, these figures do not show actual figures. However, it has been confirmed that the conversion of agricultural to non-agricultural land continues to increase. There is no definite measure regarding the height of land conversion, but the high land-use changes can threaten food availability and the existence of the Tabanan Regency as a rice granary in Bali.

Differences in Income of Farmers that Do and Do Not Change Land Functions

Farmers' income is basically divided into two, namely farm income and non-farm income. Farming income is income received from the agricultural sector, while non-farm income is an income received outside the agricultural sector. In this study, the respondent's farming income calculated only lowland rice farming because it is the main commodity.

Table 4. Comparison of Average Income of Farmers who Do and Do not Change Land Functions (per month)

Respondents Average Income	Farming		Non-Farming		The Average Total Income	
	IDR	%	IDR	%	IDR	%
Not Transfer Function	2,250,000	62%	1,363,333	38%	3,613,333	100%
Transfer Function	1,204,167	42%	1,675,556	58%	2,879,723	100%
Differences	1,045,833		312,223		733,610	

Source: Primary Data (processed)

Table 4 shows that there is a difference in the average farm income of farmers who do not and farmers who do change land functions. The average total income of farmers who do not change land functions and carried out land functions were IDR 3,613,333 and IDR 2,879,723, respectively.

Table 5. Independent Samples T Test

		Levene's Test for Equality of Variances		t-test for Equality of Means			
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference
Total Income	Equal variances assumed	.422	.520	1.489	38	.145	733611.0625
	Equal variances not assumed			1.443	28.797	.160	733611.0625

Source: Primary Data (processed)

Based on the t-test in Table 5, it is known that the Sig. Levene's Test for Equality of Variances is 0.520 > 0.05, so it can be interpreted that the data variant between farmers who changed land functions and did not change land functions was homogeneous or the same. Sig value. (2-tailed) of 0.145 > 0.05 means that there is no significant (real) difference between the average income of farmers who change land functions and do not change land functions. This is because the livelihoods outside the farm for farmers who have changed the function of land do not affect the farmers' income.

Table 6. Distribution of Farmers by Source of Income

Source of Income	Respondents (Percent)
Traders	12,50
Factoryworkers	12,50
Construction workers	15,00
Private employees	17,50
Breeder	22,50
Other	20,00
Amount	100,00

Source: Primary Data (processed)

Table 6 shows that 80 percent of the respondent farmers do other non-agricultural work, such as trading, are factory workers, construction workers, private employees, and breeders. Meanwhile, the other 20 percent are elderly farmers who only rely on the agricultural sector as their source of income.

Factors Affecting the Transfer of Function of Agricultural Land at Farmers Level

The study of this case on the factors affecting the conversion of agricultural land functions at the farm level was conducted in SubakJadi, Kediri District, Tabanan Regency. Logistic regression analysis is used to determine the factors that influence the decision of farmers to change land functions. The results of data processing by the Enter method are presented in Table 7.

Table 7. Estimation Results of Factors Affecting Farmers in Transferring Agricultural Land Functions

Variable	Coefficient	Sig.	Exp (β)	Information
Labor (X_1)	2.479	0.066	11.932	Have a significant impact*
Length of time of Farming (X_2)	-0.020	0.834	0.980	Do not have significant effect
Farming Income Proportion (X_3)	-0.001	0.969	0.999	Do not have significant effect
Dependents of the Family (X_4)	1.573	0.083	4.819	Have a significant impact*
Irrigation Network (X_5)	2.148	0.052	8.567	Have a significant impact*
Land Area (X_6)	-0.074	0.022	0.929	Have a significant impact*
Constant	-1.338	0.787	0.262	-

Source: Primary Data (processed)

Information: * significant at the level of 10%

Based on Table (7), it is known that of the six independent variables that are thought to affect the farmer's decision to change land functions, only four appear to have a significant impact. The variables that have a significant effect on farmer decisions are labor, number of dependents, irrigation networks, and land area ownership. The significant or insignificant effect of the variable can be seen from the Sig value in Table 6 which is less than the real level used, over 10 percent. Other variables have a Sig value that is greater than the real level of 10 percent. This means that the length of farming and the proportion of farm income do not significantly affect the opportunities for farmers' decisions to sell their land.

The workforce variable has a Sig amounting to 0.066. This means that labor has a significant effect on the opportunities for land conversion by farmers at the real level of 10 percent ($0.066 < 0.100$). The coefficient of results obtained is positive (+) and the value of Exp (β) or the odds ratio obtained is 11.932. This means that farmers who have difficulty finding labor have the opportunity to change land functions 11.932 times higher than farmers who do not have difficulties in finding labor. The more difficult it is to find labor the higher the chance for the farmer to change land functions.

The working force is an important factor to determine the success of farmers in farming. Each production requires an adequate workforce and the number of workers needs to be adjusted according to the needs so that the number is optimal. The workforce variable in this study is the farmer family workforce as the successor of farming activities. Based on the results of the interviews, most of the children of farmers were reluctant to follow in the footsteps of their parents as farmers and chose to work in other sectors. The biggest challenge in the agricultural sector comes from the farmers themselves, namely there is no regeneration. One of the factors for the lack of young people who are interested in the agricultural sector, especially in Bali, is the lack of knowledge about agriculture, especially the subak system (Windia, et al, 2017). The young generation's perception of the peasant profession is not much different from the perception of the urban community, namely that the farmer profession is a dirty, miserable, and less prestigious job. As a result of this change in perspective, the image of farmers in their minds has declined. Thus, agricultural land is no longer a mere social asset, but more used as an economic asset or working capital if they change occupation outside of agriculture (Ilham, 2005).

The variable number of dependents has a Sig value amounting to 0.083. This value means that the number of dependents has a significant effect on the chance of land conversion by farmers at the real level of 10 percent ($0.083 < 0.100$). The outcome coefficient is positive (+) and the Exp (β) value or the odds ratio obtained is 4,819. This means that if the number of dependents of the farmer increases by one person, then the opportunity for the farmer to change the function of the land is 4,819 times greater than for not changing the function. The greater the number of dependents of the farmer, the higher the chance for the farmer to change the function of the land.

A farmer's dependents are the number of people whose lives the farmer is still bearing. In the context of economic life, the number of dependents in the family is considered a determining factor for the welfare of a family. The greater the number of dependents, the greater the burden of life is borne by the farmers (Yudhistira, 2013). In the case studies in the research location, 63 percent of farmers have two to four dependents, 7 percent of farmers have no dependents and another 30 percent have only one dependent. The large burden of dependents causes farmers to decide to sell their agricultural land to meet the economic needs of their families.

The irrigation network variable has a Sig value of 0.052. This value means that the irrigation network has a significant effect on the chance of land conversion by farmers at the real level of 10 percent ($0.052 < 0.100$). The resulting coefficient is positive (+) and the Exp (β) value or the odds ratio obtained is 8.567. This means that farmers who experience problems with the irrigation network are more likely to change land functions by 8,567 times compared to farmers who do not experience problems with the irrigation network.

Government Regulation (PP, Peraturan Pemerintah) No. 20/2006 regarding irrigation explains that irrigation networks are channels, buildings, and complementary structures which constitute one unit required for the provision, distribution, provision, use, and disposal of irrigation water. Data from the General Directorate of Natural Resources (2016) shows the damage to irrigation networks in Indonesia reached more than 50% by 2014, although rehabilitation of irrigation facilities continues, it has not significantly overcome the damage. The irrigation network problems experienced by farmers in the research location were the construction of overhangs that were easily damaged or broken during the rainy season which caused no water flow to enter the subak and leaks in the canal ducts due to poor maintenance. The use of irrigation water decreases due to the rate of damage to the irrigation network which is faster than the rate of repair or

restoration (Rivai et al., 2013). Irrigation networks are one of the factors that affect farm production so that poor network quality can lead to crop failure. The results of research by Damayanti (2012) in the ParigiMoutong Regency reveal that irrigation can increase the production of lowland rice farming by 3.98%. If irrigation problems occur continuously, it will have an impact on farmers' income and cause farmers to sell their land.

The variable of agricultural land area has a Sig value of 0.022. This value means that agricultural land has a significant effect on the chance of land conversion by farmers at the real level of 10 percent ($0.022 < 0.100$). If the result coefficient is negative (-) and the value of Exp (β) or the odds ratio obtained is 0.929, then this means that the more land the farmer owns, the smaller the chance for the farmer to change the function of the land. Farmers who have large enough land tend to maintain their land that there is little opportunity for land conversion, and vice versa. This is thought to be due to the fact that land area is closely related to revenue. Farmers who have a wider area of land have a higher yield of production so that the income generated is greater than farmers who have a smaller land area (Puspasari, 2012). The yields from cultivating narrower land are not proportional to the capital issued by the farmers so that it will indirectly affect the income they earn in their daily lives.

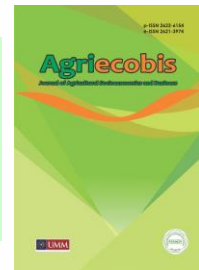
CONCLUSION

The conversion of rice fields in Tabanan Regency keeps increasing every year. The land conversion rate, which occurred between 2011 and 2018, was 8.20 percent, or 1.17 per year, with an overall decrease in land area of 1,839 ha. The projected development rate of land conversion in Tabanan Regency from 2019 to 2025 has increased with an average shrinkage rate of 1.15 percent per year. Based on the results of the T-test, there is no significant (real) difference between the average income of farmers who change land functions and those who do not change. The factors that influence the conversion of agricultural land, especially rice fields at the farm level, are labor, number of dependents, irrigation system, and a land area of rice field ownership.

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Research Article

Motivation And Perception To Support Purchasing Decisions In “Cafe & Resto Benteng Buah Naga”, Banyuwangi, East Java, Indonesia

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ABSTRACT

“Café & Resto Benteng Buah Naga” (*“Dragon Fruit Fortress Café & Resto”*) presents an innovation based on dragon fruit products, then the initial perception will determine consumer’s motivation to visit the place. The research purposed to determine the consumer’s characteristics and to state the influence of motivation and perception on purchasing decisions. The research was conducted at “Café & Resto Benteng Buah Naga” in Banyuwangi Regency, East Java Province. The sampling method was accidental sampling with 100 respondents. The data analysis used was path analysis. The results show that the majority of respondents were women (68%) with the status as a student who has an income maximum IDR 1,000,000. The motivation variable partially affects the purchase decision, as it obtains a sig value of 0.036 which means < 0.05. Variable perception obtains a sig value of 0.000 which means < 0.05, partially significant effect also on the purchase decision. It could be concluded that the consumer’s motivation and perception influence purchasing decisions at “Café & Resto Benteng Buah Naga”. The advice given is that “Café & Resto Benteng Buah Naga” continues to develop more dragon fruit-based product variants and become their special menu at the restaurant.

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INTRODUCTION

The number of domestic tourist visits in 2013 to Banyuwangi Regency was 1,057,952 people and in 2018 as many as 5,039,934 (Banyuwangi Central Statistics Agency, 2018). The increase in the number of tourist visits to the Banyuwangi Regency opens opportunities for individuals and entrepreneurs to develop various businesses that support tourism. One of them is the increase in the culinary industry, especially cafés and restaurants in Banyuwangi Regency.

The high competition in the culinary field makes business owners have a strategy and creativity to attract consumers by serving attractive meals. This type of culinary should not only pamper and fill the stomach with a variety of special dishes but also provides an interesting experience for consumers (D. N. Wijaya et al., 2018).

The growth in the number of cafés and restaurants in Banyuwangi during the period 2018-2020 increased by an average of 22.97%. The number of restaurants & cafés in 2018 was 365 restaurants, in 2019 there were 476 restaurants and in 2020 there were 550 restaurants and cafés (BPS Banyuwangi Regency, 2021). The intense competition for cafés and restaurants in Banyuwangi Regency forces companies to understand the consumer decision-making process thoroughly. Consumer behavior is the process of choosing, buying, and using products to meet their daily needs. The main factors influencing consumer behavior are needs and psychological factors, such as motivation and perception. Motivation and perception are psychological processes that influence a person in making decisions. Motivation arises from the perceived needs of consumers. The need arises from the discomfort experienced by consumers (Tompunu, 2014). Businessmen are essential to understand the determinants of purchasing decisions that coordinate customer behavior (Werenowska A & O, 2020).

Perception is a process used by individuals in selecting, organizing, and interpreting input information to create something meaningful. The perceptual process consists of selection, organization, and interpretation as a stimulus. Companies must prepare something specific as a stimulant to attract consumers (Mantik et al., 2015). The activities carried out are driven by the desire and strength that is in a person. This strength and desire are called motivation (Rybackzewska et al., 2020). Consumer purchasing decisions to buy arise because of the goods or services offered by the company. The purchase decision is a buyer's planning process to buy goods or services that are available within a certain period (D. N. Wijaya et al., 2018).

Previous research on consumer purchasing decisions has been conducted (Indriyanti et al., 2019; Marpaung & Widyastuti, 2018), as well as the choices of cafe or restaurant products have been studied (Fauzia et al., 2020; Saniah et al., 2020). Perception and motivation research has been conducted by several people, such as Yi and Jai (2019) showing that the urge to buy has a significant and strong influence on impulsive purchases.

As explained by David (2014), there is a significant influence between *word of mouth* and consumer motivation on consumer purchasing behavior. Rybackzewska et al., (2020) states that although the image of the employer is not an explicitly stated priority for consumer decision-making, it dominates consumer choice and satisfaction (Lubis & Hidayat, 2017; Wulandari & Iskandar, 2018). According to the explanation of Supriyadi, Wiyani, and Indra, (2017), brand image affects purchasing decisions. Research by D. N. Wijaya et al., (2018) shows that partially and simultaneously lifestyle and motivation variables have a significant impact on decision making. Research by Tesalonika et al., (2017), shows that *store atmosphere* and perceived value simultaneously affect customer satisfaction. Amaliah, Jusni, and Munir (2013) determine that variables in lifestyle, motivation, perception, and attitude have a positive effect on purchasing decisions. Eldesouky et al., (2020) reveal consumer perceptions and attitudes towards environmental labels and their impact on consumer purchasing decisions.

"Café & Resto Benteng Buah Naga" is interesting for the research because it has an innovative concept by developing and presenting different varieties of dragon fruit products as the main ingredient. Dragon fruit is generally consumed as fresh fruit or in the form of fruit juice. The processed dragon fruit product variants carry the *modern concept* of food and beverages. "Café & Resto Benteng Buah Naga" is aimed at the millennial consumer segment, so there are always numerous visitors to this place. The study of perceptions, motivation, and purchasing decisions at "Café & Resto Benteng Buah Naga" can be used as a reference for the manager of the Cafe & Resto in order to motivate and encourage consumers and increase return visits. This study uses motivation and perception variables as independent variables and purchasing decisions as dependent

variables. The objectives of the study were to determine: (1) consumer characteristics at “Café & Resto Benteng Buah Naga”, and (2) the influence of motivation and consumer perceptions on purchasing decisions at “Café & Resto Benteng Buah Naga”.

METHOD

The type of research used is *explanatory research* which is used to test a theory or hypothesis, in order to strengthen or even reject existing theories or research hypotheses. The research was conducted in January - February 2020 at “Café & Resto Benteng Buah Naga” (“Dragon Fruit Fortress Cafe & Resto”) in Banyuwangi. The location was chosen purposively with the consideration as the business offers a variety of processed dragon fruit menus. In addition, this restaurant also serves other foods and drinks.

The sampling technique used was a combination of accidental and purposive sampling methods. The criteria for consumers who fill out the questionnaire are those who have been to “Café & Resto Benteng Buah Naga” at least twice in the last 3 months and are at least 16 years old. Accidental sampling technique, namely the determination of the sample by chance for consumers who buy products at “Café & Resto Benteng Buah Naga”. The number of samples is 100 people. The data measurement methodology uses a Likert scale with a range of scores from 1 to 4, which is used to measure the respondent's response to each question.

Table 1. Research Variables and Indicators

No	Variable	Indicator	Scores
1	Motivation (X₁)	1. There is a desire to buy products all the time 2. There are affordable prices for cafe & restaurant products 3. Some cafes & restaurants are easy to find 4. There are promotions from cafés & restaurants 5. There is a good service by café & restaurant staff	Strongly Disagree (SD) = 1 Disagree (D) = 2 Agree (A) = 3 Strongly Agree (SA) = 4
2	Perception (X₂)	1. Consumer perceptions of the used company image. 2. Consumer perceptions of the benefits of the provided products 3. Consumer perceptions of product quality assurance	Strongly Disagree (SD) = 1 Disagree (D) = 2 Agree (A) = 3 Strongly Agree (SA) = 4
3	Purchase Decision (Y)	1. Consumers make product choices while making purchasing decisions 2. Consumers need time to considerate in making purchasing decisions 3. Consumers get their satisfactions, so they will repurchase	Strongly Disagree (SD) = 1 Disagree (D) = 2 Agree (A) = 3 Strongly Agree (SA) = 4

Source: Primary data analysis (2020)

The instrument test is regarding validity and reliability. Meanwhile, the classical assumption test includes normality, linearity, heteroscedasticity, and multicollinearity, so that the analysis model fulfills the assumptions used. The analysis methods used are descriptive analysis and *path analysis*. The path analysis model includes the independent variables of motivation (X₁) and perception (X₂), as well as the dependent variable in purchasing decisions (Y). Descriptive analysis is used to determine the identity of respondents, including gender, age, latest education, occupation, income, reasons for choosing “Café & Resto Benteng Buah Naga”, favorite menu, number of visits, and items distributed from each variable.

Path Analysis is a technique of analyzing the causal relationship that occurs. The perception and motivation variables affect the purchasing decision variable, not only directly but also indirectly. Hypothesis test with t-test (partial). The value of direct influence is seen from Standardized Coefficients Beta. The initial

stage of the path analysis using the structural equation is to calculate the value of the correlation coefficient, the coefficient of determination, and the path coefficient.

The hypothesis determination criteria are as follows.

- If the probability value is $0.05 \leq \text{Sig}$, then H_0 is accepted and H_a is rejected, which means it is not significant. It means that the independent variable does not affect the dependent variable.
- If the probability value is $0.05 > \text{Sig}$, then H_0 is rejected and H_a is accepted, which means that it is significant. Thus, there is an influence between the independent variables on the dependent variable. However, in case of unavoidable factors, the writing style must follow the "Results and Discussion" section.

RESULTS AND DISCUSSION

Research Instruments Test

The validity test is used to determine whether the research data is valid and can be continued for the next test (Ghozali, 2011). The results of the validity test showed that all statement items obtained $r_{\text{count}} > r_{\text{table}}$ (0.195), a positive r value, and a significance value < 0.05 . Thus, it can be concluded that the statement items are declared valid so that the indicators are feasible and can be used as measurements of the research variables.

Reliability testing aims to ensure that the research tools used produce measurement concepts consistently without bias. The test results show that Cronbach's value ranges from 0.7 to over 0.9. The latent variable is more reliable if it has Composite Reliability above 0.60 or close to number 1 (Hayati & Hakim, 2014). The test results show the value of composite reliability coefficients and Cronbach's alpha coefficients > 0.60 (reliable). The research instrument shows that the instrument items are declared reliable or trustworthy so that they can be used for variable measurement.

Classic Assumption Test

The normality test uses the *One-Sample Kolmogorov Smirnov* test method. The test criteria are as follows: if the significance value is ≤ 0.05 , then the data are not normally distributed; whereas if the significance value is ≥ 0.05 , then the data is normally distributed. The normality test, carried out using the Kolmogorov Smirnov test obtained a significance value of 0.919, which means ≥ 0.05 ; it can be concluded that the research data is normally distributed and suitable for use in the analysis.

The multicollinearity test can be accomplished by regression test using the reference value of VIF (Variance Inflation Factor) and Tolerance value. The criteria used are:

1. If the tolerance value is > 0.10 , it can be said that there is no multicollinearity problem.
2. If the VIF value is < 10 , it can be said that there is no multicollinearity problem.

The multicollinearity test results obtained *tolerance* of motivation (X_1) 0.432 and perception (X_2) 0.432. The test results on the exogenous variables of motivation and perception obtained a tolerance value of > 0.10 , therefore, it can be concluded that there is no multicollinearity between the independent variables.

Decision-making by Julianita (2013): if there is a certain pattern, such as the dots forming a certain regular pattern (wavy widening then narrowing), then heteroscedasticity occurs. Unless there is a clear pattern, such as the dots spreading above and below the 0 on the Y axis, there is no heteroscedasticity.

The research data shows a *scatterplot* that spreads randomly above or below zero and does not form a clear pattern. Thus, it can be concluded that in the regression model formed, heteroscedasticity does not occur and is feasible to use.

The linearity test aims to test whether the form of the correlation between the independent variable and the dependent variable is linear or not. The test results show that the p value of linearity at (X_1) is 0.015, this means that the p value of linearity is < 0.05 . So it can be concluded that the constructed model has a linear correlation and is suitable to be used.

The Characteristics of the Consumers

Characteristics of consumers as respondents are consumers who visit “Café & Resto Benteng Buah Naga”, have previously made at least two purchases in the last three months, the age of the consumer is at least 16 years old. Consumer characteristics provide an overview of age, gender, income, and type of work.

Table 2. Characteristics of the “Café & Resto Benteng Buah Naga” respondents

No.	Characteristics	Information	Frequency	Percentage
1	Gender	Male	32	32%
		Female	68	68%
2	Age	16-20	27	27%
		21-25	68	68%
		26-30	2	2%
		>30	3	3%
3	Jobs / Activities	School/Collage Student	68	68%
		Civil	1	1%
		Servant"/Indonesian		
		Army /Police		
		General employees	16	16%
		Unemployed	7	7%
		Others	8	8%
4	Consumer's Income	IDR 0 -1.000.000	74	74%
		IDR 1.000.001-2.000.000	15	15%
		IDR 2.000.001-3.000.000	7	7%
		IDR>3.000.000	4	4%

Source: Primary data analysis, 2020

Table 1 shows that the majority of consumers making purchasing decisions at “Café & Resto Benteng Buah Naga” are women (68%). Usually, they come in groups. The age range of consumers was between 16 and 25 years (95%), of which 27% were from 16 to 20 years old and 21-25 years old as much as 68%. This age range is relevant to the status of the majority of “Café & Resto Benteng Buah Naga” consumers: students (68%), then private employees (16%). The remaining percentage are Civil Servants, unemployed and other occupations. Based on the characteristics of the income level, most of the respondents were in the range below IDR 1,000,000 (74%).

The results of the analysis show that the majority of consumers of “Café & Resto Benteng Buah Naga” are dominated by groups of learners and students with an age range of 16-25 years and income below IDR 1,000,000. The condition and atmosphere (store atmosphere) of “Café & Resto Benteng Buah Naga” is enjoyable and convenient to take pictures, as well as the wide variety of products are offered. Its trademark is a dragon fruit-based product so it caters to the tastes of most student visitors. This condition is in line with the characteristics of café & restaurant consumers, namely students. The consumer segment that does not yet have its income, is mature and capable of making purchasing decisions. According to Marpaung & Widyastuti (2018), the age range of the late 20s and the age between 30-40 years is the beginning of financial and career stability so that there will be a tendency to buy items that are classified to meet self-actualization needs such as buying food and beverages that can maintain prestige in the social group.

Path Analysis

The path analysis model used in this study uses a structural equation model. The initial stage in path analysis with a structural equation is to calculate the value of the correlation coefficient, the path coefficient, and the coefficient of determination. The results of the path analysis are shown in Table 3.

Table 3. Value of Correlation Coefficient, Path Coefficient, and Coefficient of Determination

Correlation coefficient	Path Coefficient (Standardized Coefficients Beta)	Coefficient of Determination
$r_{X_1X_2} = 0.758$	$\rho_{YX_1} = 0.234$	R Square = 0.498
	$\rho_{YX_2} = 0.511$	$\rho_{YX_\epsilon} = 0.501$

Source: Primary data analysis (2020)

Table 3 shows the value of the correlation coefficient, which is used to determine the closeness of the correlation between the research variables. The closeness of the correlation between the motivation and perception variables is 0.758 which means that the correlation is very strong. This interpretation can be seen from the following criteria:

- 0 - 0.25 : very weak correlation (considered non-existent)
- > 0.25 - 0.5 : the correlation is strong enough
- > 0.5 - 0.75 : strong correlation
- > 0.75 - 1 : very strong correlation

The R-Square has the function to see the quality level of the model being used. If the R-Square value is higher, it means that the research model will be more effective. The strong, moderate, and weak models are shown by the R-Square value of 0.70, sequentially 0.50, and 0.25. The coefficient of determination (R Square) is used to determine the contribution of the independent variables of motivation (X_1) and perception (X_2) to purchasing decisions (Y). The value of R Square is 0.498, which means that the variables of motivation and perception are able to explain 49.8% of the purchase decision.

Based on the acquisition of the R-Square value, the path coefficient of other variables outside the model can be calculated and the value is 0.708, while the magnitude of the influence caused by other variables outside the motivation variable (X_1) and perception (X_2) is determined by $\rho^2_{YX_\epsilon}$ which is $(0.708)^2 = 0.501$ or 50.1%.

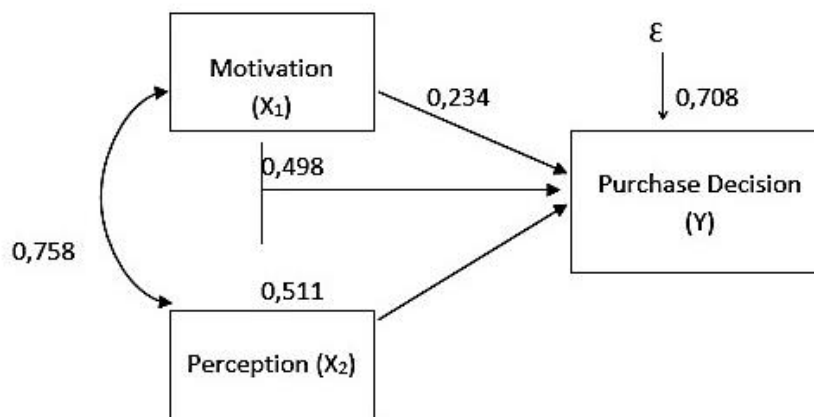


Figure 1. Path Diagram

The path diagram is used to describe the structural correlation between the motivation variable (X_1) and perception (X_2) on the purchasing decision variable (Y). Below is a path diagram between the research variables

Figure 1 illustrates the structural correlation between variables X_1 , X_2 , and Y . The one-sided arrow depicts the direct influence of motivation and perception variables on purchasing decisions. Double arrows illustrate the correlation between the independent variables of motivation and perception. There are no intersecting paths in this diagram.

Hypothesis test

Table 4 presents the results of the t-test to determine the decision to approve or reject the hypothesis. The partial test results for the motivation variable (X_1) obtained a significance value of 0.036, which means <0.05 ; or significant, then H_0 is rejected and H_a is accepted. Motivation variables partially have a significant influence on consumer purchasing decisions at "Café & Resto Benteng Buah Naga". The products served are made from dragon fruit and other fruits in fresh form, as one of the main attractions for consumers. The motivation in purchasing decisions at "Café & Resto Benteng Buah Naga" depends on several factors such as income, age, consumer tastes or preferences, as well as product attributes such as taste, choice variants, and lifestyle.

Table 4. Partial hypothesis testing (t-Test) results

t-Test (partial)			
Path	t_{count}	t_{table}	Sig.
Motivation (X_1) to Consumer Decision (Y)	2,124	1,98	0,036
Perception (X_2) to Consumer Decision (Y)	4,640	1,98	0,000

Source: Primary data process (2020)

The results of this motivation analysis are consistent with the following studies. Listyowati et al., (2020) explains that a person's income can be used to make their needs meet and can be used as a motivation for repurchasing or other products according to their desires. Young consumers aged 16-25 years are relatively easy to switch to other similar products such as coffee, tea, or other beverages, by considering the taste attributes of the product as a factor that influences consumer decisions on food and beverage products (Ramadhani et al., 2020). Consumer preferences in purchasing a product are more based on taste interests even though the price is higher because of the packaging, and the brand (Irwinsyah & Nurlatifah, 2020; Sundari&Umbara, 2019). The trend of increasing *preference for green products* strengthens consumer motivation (Wang & Hou, 2020).

The results of the analysis are also in accordance with Tomponu's research (2014) which states that motivation can influence consumers in purchasing decisions at KFC Bahu Mall Manado. According to Marpaung & Widyastuti (2018), consumers behave actively in every stage of the purchasing decision-making process. Another ancillary research states that the amount of family income per month, the level of formal education, the intensity associated with the reference group, and purchase motivation have a significant (positive) effect on consumer decisions (Devi & Hartono, 2014). According to the explanation of Keren & Sulistiono, (2019); Khalik&Permatasari (2018); Miauw (2016); Rahman, Sumampouw & Sambul (2016); Tewel, Montjai & Lengkong (2014) motivation affects purchasing decisions.

The partial test of the perception variable (X_2) obtained a significance value of 0.000, which means <0.05 , then H_0 is rejected and H_a is approved. Perception variable partially influences purchasing decision making at "Café & Resto Benteng Buah Naga". Decision-making perceptions can be influenced by education and type of work. If someone is already working, the perception of purchasing decisions will be different from that of students. A worker will think about the costs incurred when buying something that is not needed or simply to fulfill own desires. The results of this analysis are consistent with the research of Tirajoh (2013) which states that the perception variable partially affects the interest in purchasing a product at KFC Megamas Manado, Kurniasih & Fauzi (2017). This study confirms Wardhani's (2015) statement that consumers buy products that provide the highest value.

“Café & Resto Benteng Buah Naga” has good quality and fresh products, thus attract consumers to make transactions/purchases. As stated by Sutrisno et al. (2020), product quality and price perception have a significant effect on product purchasing decisions, so that all hypotheses are strengthened. This means that business owners must improve product quality and set product prices carefully so that they do not match competitors' prices. Likewise, it is in line with Prasetyo, Fauzi DH, & Brillyanes (2018); Kaunang, Sepang, & Rotinsulu (2015), who explain that perceptions affect purchasing decisions.

Someone who has a perception about low prices and a good brand image at “Café & Resto Benteng Buah Naga” will be tempted to buy. Therefore, perceptions about price and brand image can influence purchasing decisions. This statement is in line with Setiawati & Tyas (2015) which states that price and brand image influence purchasing decisions. Consumer behavior in purchasing decisions for organic food is also influenced by consumer perceptions, motivation, attitudes, beliefs, values, purchase intentions, and organic food characteristics (Nica, 2020).

CONCLUSION

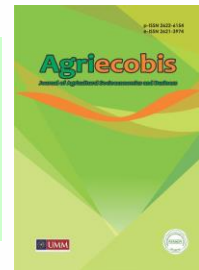
The majority of “Café & Resto Benteng Buah Naga” consumers are women with student/employment status who have an income of < IDR 1,000,000. The t-test on the motivation and perception variables (X_2) obtained values that are both significant. This explains that the variables of motivation and perception partially affect purchasing decisions at the “Café & Resto Benteng Buah Naga”, Banyuwangi Regency. The suggestion given is that “Café & Resto Benteng Buah Naga” continues to develop more dragon fruit-based product variants and become their special menu at this restaurant.

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Research Article

The Impact of Credit on Multidimensional Poverty in Rural Areas: A Case Study of the Indonesian Agricultural Sector

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ABSTRACT

Poor farmer households are a vulnerable group in rural areas. Various poverty alleviation measures have been launched to help poor farmer groups become more prosperous. The policies launched were in the form of cash transfers, empowerment, and access to formal financial institutions. Policies for providing formal financial access continue to face many obstacles, one of which is credit risk and farmer literacy. The study aims to estimate the impact of credit on multidimensional poverty in poor farmer households in Indonesia. Secondary data were obtained from the Indonesian Family Life Survey (IFLS) batch 4 and 5. The impact estimation method used was *propensity score matching* combined with the difference in differences. The results showed that credit programs for poor farmers, initiated by official financial institutions, significantly helped farmers out of poverty, although the value was small. The addition of control variables such as education, ownership of household assets, and ownership of agricultural land actually made the credit program more modifiable at the policy level. Credit can be used as a complement to policies related to improving farmer education and knowledge in the form of agricultural modernization, as well as to scale-up of farmer household businesses.

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INTRODUCTION

Since 2014, President Jokowi has issued nine major development programs called NawaCita. The third letter of NawaCita contains an interpretation of a new development paradigm, namely the development of Indonesia from the periphery by strengthening regions and villages within the framework of a unitary state (KPU, 2014). The implication of this paradigm is to empower the economy of lower-class communities that are widely distributed in rural and suburban areas (Arham et al., 2020). Rural has special characteristics with agricultural and fishery activities or other extraction activities, where the contribution to the economy is no longer dominant. Meanwhile, the contribution of the manufacturing industry is increasingly dominant. This phenomenon is known as sectoral shifting or structural shifting from the primary to the secondary sector (Helleiner et al., 1976). The Statistics Indonesia (2020) confirms a shift where during the Covid-19 pandemic the industrial sector had the largest share in Gross Domestic Product (GDP), namely 19.98 percent while the share of agriculture was only 12.84 percent.

As a developing country, Indonesia has experienced a shift in the economic structure that has an impact on reducing the agricultural production share of GDP (Byerlee et al., 2009). In fact, villages and towns still have inequality problems in several fields such as living standards, welfare, children's education levels, and also health aspects both in terms of accessibility or utility (Demissie&Kasie, 2017; Miranti, 2017). Based on data from the Statistics Indonesia (2020), the number of poor people in rural areas is 15.26 million, which is more than in urban areas, namely 11.16 million people. Based on the number of poor people, more than 60 percent of the poorest population are farmers. Therefore, farmers are referred to groups of people who are very vulnerable in the face of poverty. This condition is because the majority of farmers in Indonesia are classified as subsistence farmers with low wages (Arham et al., 2020). Besides, in general, the agricultural sector has a lower level of multiplier effect due to small business and capital capacities, so it is slower to reduce poverty (Dewbre et al., 2011).

Farmers have difficulty accessing economic sources such as capital and farming financing (Sayaka&Rivai, 2011). The difficulty of farmers is due to their small business scale, so they cannot accumulate capital. After each harvest, the proceeds from the sale are used to pay for loans for production facilities and daily needs (FAO, 2005). In terms of literacy, Dove (2012) states that Indonesian farmers are less able to understand the procedures that are complex in formal financial institutions. Apart from that, collateral requirements are also a big obstacle that farmers must face (Sayaka & Rivai, 2011). If agricultural land is used as collateral, it is almost certain that most farmers are not eligible for capital from formal financial institutions. This is because the owner-tenants generally do not have land certificates, especially if they are tenants of other farmers' land (Arham et al., 2020). The banking sector is not interested in financing the agricultural sector because it is considered high risk, either due to natural disturbances or fluctuations in product prices (Asante-Addo et al., 2017).

The difficulty for farmers to access credit has negated the condition of the government's policy of accelerating poverty alleviation through the banking channel in the form of a low-cost credit program for the population (Rifai & Associates, 2013). Although adjustments have been made to increase the absorption capacity of debtors, it is imperative to assess the socio-economic conditions of farmers and rural communities in general who benefit from the anti-poverty program. According to the Coordinating Ministry for Economic Affairs (2020), the assessment is related to the ambition for (KUR, Kredit Usaha Rakyat) distribution and the reluctance of banks to channel due to the risk factor of bad credit history. In addition, in developing an anti-poverty policy in the agricultural sector, it is necessary to consider the movement of the Farmer Exchange Rate (NTP, Nilai Tukar Petani), as it describes the indicators of farmer welfare. Credit assistance schemes, socio-economic conditions, asset ownership, arable land area, farmers would be more suitable if a poverty reduction program with direct cash assistance programs could directly benefit farmers (Coleman, 2000; Coulibaly & Yogo, 2016; Elsas & Krahn, 2000; Fianto et al., 2018; Sun et al., 2020).

Therefore, this study will examine the level of theoretical suitability regarding the ability of credit in the form of microfinance which according to Idolor & Eriki (2012) will increase the economic capacity of the poor, especially in rural areas, so that they will have a greater opportunity to grow into a large area. Rural financing according to Sun et al. (2020) has an important position to boost agricultural development, rural economies, and most importantly farmers' income. It is also believed that empowerment and increasing income in the agricultural sector have a strong influence on poverty reduction (Cervantes-Godoy & Dewbre, 2010; Chen & Ravallion, 2004; Christiaensen & Demery, 2007). This premise will support the development paradigm from the periphery to the geographic center.

Finally, the link between poverty reduction and access to credit will contribute to effective anti-poverty policy and other policy options such as the unconditional cash transfer program. The results of the evaluation of these two policies are expected to provide a conclusion on whether the credit is a substitute or a complementary policy. If credit is a substitute policy, budget planning in the form of credit subsidies can be

carried out, whereas if it is complementary, certain anti-poverty policies can be used as a companion to credit as an effort to reduce poverty in rural areas of Indonesia.

THEORETICAL REVIEW

Multidimensional Poverty

Commencing with the writings of Townsend (1979) and Sen (1985), poverty has been viewed from a different perspective that is broader and multidimensional. Amartya Sen (1980 and 2000) criticized the poverty approach using income analysis. According to him, the monetary approach only portrays a small part of the enormous poverty problem. The problem of poverty is not only related to purchasing power, income, or consumption, but there are other and broader dimensions of poverty conditions. Therefore, multidimensional poverty is analyzed by adding a calculation component where previously it was only based on income or consumption expenditure (Batana, 2013). Multidimensional poverty analyzes poverty at the household or individual level. Multidimensional poverty is a combined measure of the dimensions of health, education, and living standards (see Table 1).

Table 1. Dimensions and Indicators of the Multidimensional Poverty Index (MPI)

Dimension	Indicator
Health	Nutrition
	Infant Death
Education	Long Time in School
	Attendance in Education
Quality of Life	Fuel for Cooking
	Sanitation
	Clean water
	Source of Illumination
	House Floor Condition
	Asset Ownership

Source: (OPHI, 2020)

Health is measured using the approach to nutrition and infant mortality. Education is measured by average years of schooling, and the final school diploma completed. Living standards are calculated using the approach of several combinations of community social objects such as cooking fuel, toilet quality, water, electricity, house floors, and the condition of household goods (Artha & Dartanto, 2015). The complexity in calculating multidimensional poverty for United Nations Development Programme (UNDP) makes it an integrated part of the framework for sustainable development goals (SDGs).

Alkire & Foster (2011a) calculated the weighting MPI approach. The weight of the dimensions is the same, which is 1/3 of each dimension. And each aspect in the dimension is also weighted equally. Thus, the weight of the indicators is obtained as follows: the weight of the health indicators which consists of two indicators which are assessed at 1/6, the weight of education which consists of two indicators is assessed as 1/6, and the weight of the quality of life which consists of the good indicators with the score of 1/18. Every person who is assessed as in multidimensional poverty is visible from the indicators assessed. The assessment is in the range from 0 to 1. When a person meets the poverty assessment, based on the multidimensional poverty indicator, it will have a value of 1. The assessment will continue to be carried out on each indicator (Alkire & Foster, 2011b).

This method has been applied in several countries around the world, one of which is in Punjab, Pakistan using the Alkire and Foster's Method (AFM). A study by Awan and Aslam (2011) in Pakistan used eight dimensions to calculate multidimensional poverty. The dimensions referred to are housing, water quality, sanitation, electricity, assets, education, consumption expenditure, and land. The results from the Pakistan study show that land, consumption, sanitation, housing, and education are the main contributions among the variables in multidimensional poverty. Another study was conducted by Batana (2013) in Africa. The dimensions used are assets, health, education, and empowerment. A study by Batana (2013) concluded that

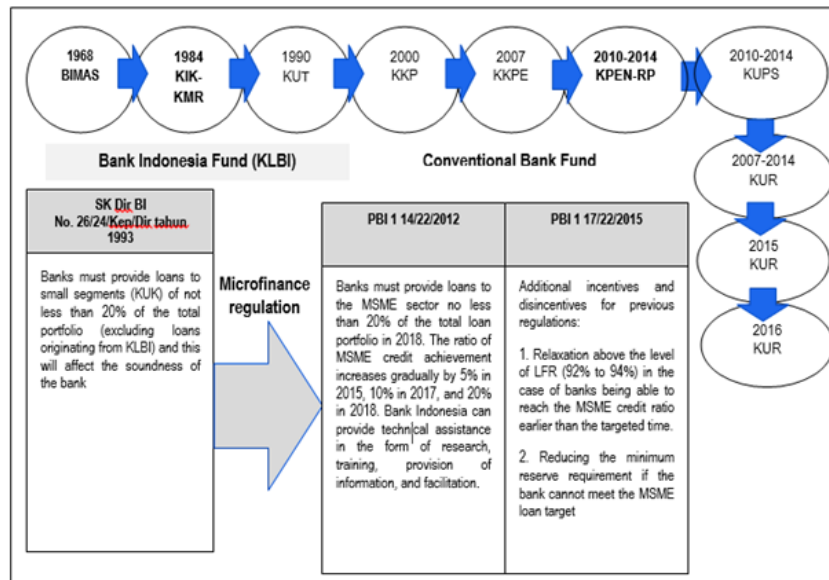
AFM is suitable for measuring poverty in developing countries. The results of this study are the same as those of Whelan et al. (2014) which applies AFM with many non-monetary indicators which are grouped into four main dimensions: basic deprivation, consumption, health, and neighborhood environmental for 28 European Union member countries.

Microcredit for the Agricultural Sector

Commercial bank lending for the agricultural sector in Indonesia is still segmented for large and medium-sized farms (Wati et al., 2014). The reason the main sector performs credit segmentation is the credit risk factor. The problem of asymmetric information, lack of collateral, and low profitability have made banks view the agricultural sector as a high-risk consumer (Hanafie, 2010; Yeni Septa, 2015). In fact, access to finance, either working capital or investment, is needed by farmers of all business scales. Thus, the study from IFAD shows that the lack of formal credit affects the increase in rural poverty (IFAD, 2011).

Observing the limitations and impact of credit on the agricultural sector and rural development in general, the government is trying to develop a *microfinance* scheme to help farmers gain access to finance. Microfinance schemes are actually not a new phenomenon. Efforts to provide microfinance services emerged in the 1960s when developing countries actively modernized agriculture through various agricultural intensification and extension programs (Fard, 2008). Since the inception of the Grameen Bank in the early 1980s, global financial institutions have begun to pay great attention to microfinance as an effective economic and social empowerment mechanism in poverty alleviation (S. R. Khandker & Haughton, 2009). In Indonesia, microfinance schemes include micro-credit (loans of less than IDR 20 million, without collateral, credit repayment terms of 6 to 12 months), micro-savings (savings value of less than IDR 20 million), and micro-insurance (in general, the premium value is below IDR 50 thousand).

In general, the microcredit program is empowerment with a subsidized pattern due to the high cost and risk of credit being given. In practice, the subsidy scheme can take the form of an interest subsidy, a guarantee fee subsidy, loan exemption, or administrative support for loan providers (Fard, 2008; Hanafie, 2010; IFAD, 2011; Wati et al., 2014; Yeni Septa, 2015). The credit program that provides subsidies for poor farmers is one of the efforts to intensify agriculture (Yeni Septa, 2015). The development of credit programs for the agricultural sector is inseparable from the agricultural intensification assistance program. The scheme for distributing microcredit programs for small farmers has actually been popular since the New Order era, namely the Bimas program in the 1970s. This program was marked by the formation of Village Unit Cooperatives (VUC), Village Unit Economic Activities (VUEA), and BRI Village Units to expand production inputs and credit for farmers (Martowijoyo, 2007). After that, many programs have their ups and downs due to fixes from previous failures.



Source: Siregar (2016)

Figure 1. The Progress of the Micro Credit Program in Indonesia

RESEARCH METHOD

Data Analysis

The study uses data from the 4th and 5th batches of the Indonesian Family Live Survey (IFLS) in 2007 and 2014 to estimate and calculate the impact of credit access on the multidimensional poverty of rural farmers. IFLS data is longitudinal survey data or micro survey data that includes data on individuals, households, and communities in Indonesia. IFLS data are collected and compiled by RAND Corporation based on household surveys conducted in 13 provinces out of 27 provinces in Indonesia. The thirteen provinces are Jakarta, West Java, East Java, South Kalimantan, South Sulawesi, South Sumatra, West Nusa Tenggara, Central Java, Yogyakarta, Bali, North Sumatra, West Sumatra, and Lampung. The survey resulted in a sample that represents about 83% of the Indonesian population and includes more than 30,000 people living in 13 of the 27 provinces.

Calculation of the Multidimensional Poverty Index using the Alkire-Foster method

The Alkire-Foster method (Alkire & Foster, 2011a) is used to calculate the *multidimensional poverty index*. This method uses a poverty vulnerability matrix (deprived). The matrix contains indicators in the dimensions of the *multidimensional poverty index*. For each indicator, a weighted measurement will be carried out. The measurement of the weighted dimensions must be the same, namely, 1/3 (one-third) of each dimension, and each indicator in the dimension is also weighed the same. If $d \geq 2$ is the number of dimensions and $x = [x_{ij}]$ is the $n \times d$ matrix, which is the selected event, where x_{ij} is the selected occurrence of individual i ($i = 1, \dots, n$) in dimension j ($j = 1, \dots, d$). Then x is depicted in the matrix below:

$$x = \begin{pmatrix} x_{11} & \cdot & x_{1j} & \cdot & x_{1d} \\ \cdot & \cdot & \cdot & \cdot & \cdot \\ x_{i1} & \cdot & x_{ij} & \cdot & x_{id} \\ \cdot & \cdot & \cdot & \cdot & \cdot \\ x_{n1} & \cdot & x_{nj} & \cdot & x_{nd} \end{pmatrix} \quad (1)$$

Suppose, z is the row vector of a particular dimension in the household z_j , x_i is the row vector of each individual I selected for each dimension, and x_j is the *column vector* of dimension j selected among the analyzed households. Thus, the deprivation matrix $X_{0ij} = 1$ means that individual I is indicated as poor (deprived) in dimension j , and if $x_{0ij} = 0$ then the individual is not indicated as poor in dimension j . Further, suppose k is the cut-off line, by adding up each row (x_{0ij}), we will get column vector c , which is the selected poor event which contains c_i , which is the number of selected poor events for individual i , someone (individual i) will be considered poor if $c_i \geq k$.

Furthermore, for the first calculation, namely calculating the *headcount ratio*. Notate q_k as the number of poor people in each vector z household and at the limit (cut-off k), the headcount ratio (H) can be illustrated as follows:

$$H = \frac{q_k}{n} ; q_k = \sum_{i=1}^n p_k \quad (2)$$

Then if it is seen that the possibility of people being classified as poor in each dimension can be illustrated as follows:

$$\bar{c}_i(k) = \frac{1}{d} [c_i p_k] \quad (3)$$

Meanwhile, the average deprivation for each poor individual can be illustrated as:

$$A = \frac{1}{q_k d} \sum_{i=1}^n c_i p_k \quad (4)$$

Budiantoro, et al. (2013: 4) also calculated the Multidimensional Poverty Index by simplifying the illustration of its mathematical function. Budiantoro performs calculations in three main stages. This stage is to carry out weighting on each indicator in the dimensions of each individual to find out individuals who experience deficiency or are below the limit of people who are considered poor in dimensions. Individual assessment for each dimension has a range from 0 to 1. When a person meets the poverty assessment according to the MPI indicator, that person will be subject to point 1. The assessment will continue to be carried out on each indicator. After obtaining an assessment of all indicators and dimensions, it will be calculated based on the following formula:

$$C_i = w_1 I_1 + w_2 I_2 + w_3 I_3 + \dots + w_d I_d \quad (5)$$

Where, $I_l = 1$ if someone is exposed in indicator l , and $I_l = 0$ if not. W_i is the weight of the indicator with $\sum_{i=1}^d$

Propensity Score Matching and Difference in Differences

This study uses two quantitative approaches using the Propensity Score Matching (PSM) and Difference in Differences (DD) methods. The collaboration of the two methods is carried out to find out the effect of an intervention (treatment) on the outcome to be studied by proving the similarity of the characteristics of the two sample groups being compared (S. Khandker et al., 2009). The advantages of these two methods are considered to be able to answer the research hypothesis, namely that access to credit affects changes in poverty status. PSM is applied to obtain a sample group that will be used in estimating DD based on the probability of a farmer household receiving credit with multiple observed household characteristics. The implementation of PSM will eliminate households that do not have similar characteristics. Combining PSM and DD can include observable and unobservable characteristics with constant assumptions over time (Khandker,

Koolwal & Samad, 2010). DD is used to estimate the effect of credit on the poverty status of farmer households.

DD is assessed using panel data. The use of DD with panel data requires the availability of data in the *baseline* period, in this study data from 2007. Estimation is carried out by measuring the *outcomes* and *covariates* for groups receiving farmer household credit from formal or informal financial institutions. The *fixed effects panel regression* model is used to maintain unobservable *time-invariant* heterogeneity and observable characteristic heterogeneity over many observation periods. Khandker and Houghton (2009) explain the DD estimation with the *panel fixed effect regression* model in an equation, which is as follows:

$$Y_{it} = \phi Y_{it} + \delta X_{it} + \eta_{it} + \varepsilon_{it} \quad (1)$$

$$(Y_{it} - Y_{it-1}) = \phi(Y_{it} - Y_{it-1}) + \delta(X_{it} - X_{it-1}) + (\eta_i - \eta_i) + (\varepsilon_{it} - \varepsilon_{it})$$

$$(Y_{it} - Y_{it-1}) = \phi(Y_{it} - Y_{it-1}) + \delta(X_{it} - X_{it-1}) + (\eta_i - \eta_i) + (\varepsilon_{it} - \varepsilon_{it}) \quad (2)$$

$$\Delta Y_{it} = \phi \Delta T_{it} + \delta \Delta X_{it} + \Delta \varepsilon_{it} \quad (3)$$

The equation above explains that the *outcome* Y_{it} can be estimated on T_{it} treatment with X_{it} covariates and the unobservable heterogeneity of time-invariant η_i which may correlate well with treatment and other characteristics that cannot be observed by ε_{it} . The derivation of equation (2) is carried out considering the change in time and results in equation (3). It should be noted that heterogeneity η_i is time-invariant, so this variable is excluded from the equation. The treatment impact is analyzed by Ordinary Least Square (OLS).

The following is an econometric model for estimating the impact of credit on multidimensional poverty in farmer households in Indonesia:

$$Y_{it}^* = \alpha + \beta T_{it} + \rho t + \gamma(T_{it} \times t) + \sum_{j=1}^n \beta COV_{jit} + \varepsilon_{it}$$

$$Y_{it}^* = \alpha + \beta T_{it} + \rho t + \gamma(T_{it} \times t) + \sum_{j=1}^n \beta COV_{jit} + \varepsilon_{it} \quad (4)$$

Y_{it} is the result of household poverty status, where (*) indicates each poverty status, namely being not poor or becoming poor. α denotes the intercept, with T_{it} as the dummy variable receiving credit. t is a dummy variable that shows the time before and after receiving credit, β refers to the treatment coefficient which is a household characteristic that supports someone falling into poverty or out of poverty. The calculation of the effect of credit on poverty status will be seen when the average value of the credit effect is multiplied by the probability of change in household poverty status.

RESULTS AND DISCUSSION

The Results of the Propensity Score Matching on Credit Recipient Farmers Households

The estimation of the Propensity Score Matching (PSM) was carried out only on the IFLS 4 data from 2007, in order to eliminate the unequal characteristics when analyzed. PSM estimates in 2007 and used as the base year for clustering analysis of multidimensional poor farmer households with details of the number of 425 poor households and 3,484 multidimensional non-poor households (see Figure 2).

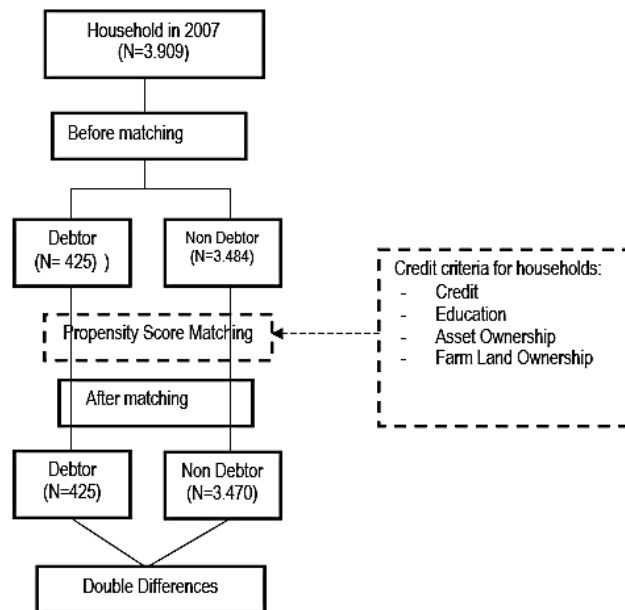
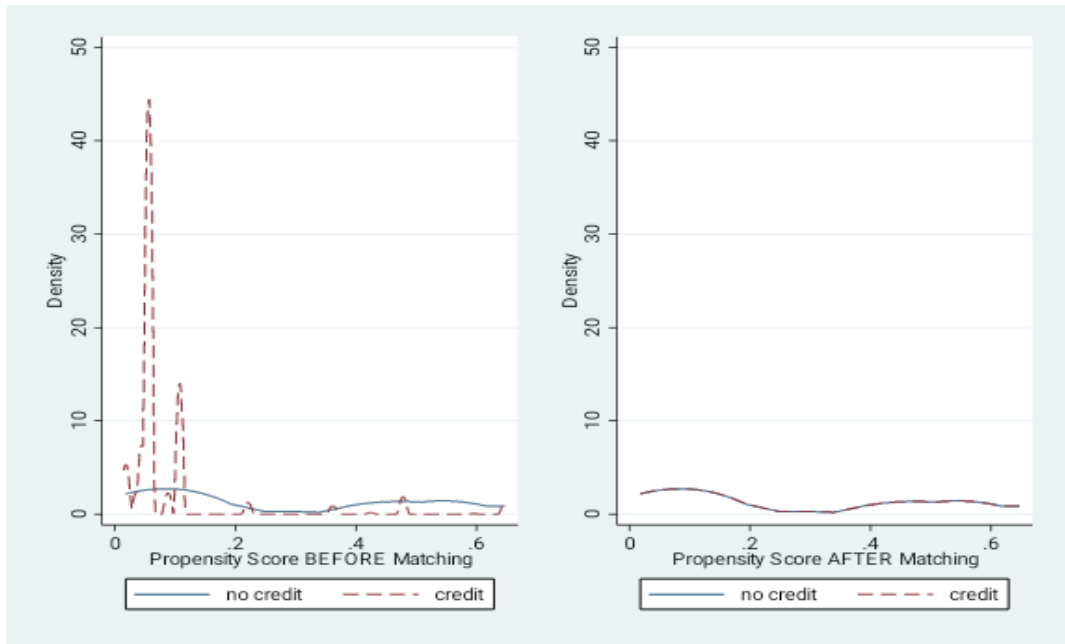


Figure 2. Multidimensional Poverty Clusterization of Farmers

The original 3,909 households in 2007 (IFLS4) were eliminated by the PSM estimate and the remaining 3,895 households were due to unequal characteristics. Table 2 shows the characteristics of multidimensional poor farmer households, namely receiving credit, owning farmland, owning household assets, ladder, and level of education. These four characteristics are obtained after trying to select several similarities of characteristics so that the best balancing test value is obtained. Khandker (2010) states that the search for the characteristics that best represent a data match must be carried out until the balancing test value is satisfactory.

Table 2. Balancing Test Propensity Score

Inferior of the block of propensity score	Household		Total
	Multidimensional Not Poor	Multidimensional Poor	
0.0181564	633	20	653
0.05	1.902	97	1.000
0.075	99	16	115
0.1	602	88	690
0.2	91	29	120
0.4	92	109	201
0.6	51	66	117
Total	3.470	425	3.895



Source: Calculations Based on (S. R. Khandker et al., 2010)

Figure 3. Region of Common Support (Propensity Score) for Poor Farmer households after receiving and not receiving credit

Figure 3 shows good *balancing test* results since there are visually many overlap areas between groups of credit recipient households and non-credit recipient households (Caliendo & Parro, 2015; S. R. Khandker et al., 2010). Table 3 shows the control variables that explain the characteristics of poor farmer households receiving credit. All the control variables show a significant value in statistics.

Table 3. Estimation Results of Propensity Score Matching Poor Farmer Households Receiving Credit

Variable	Multidimensional Poor Farmer Households
Credit	-0.219 (0.198)
Farming Business Land	0.696*** (0.118)
Head of RT Education	2.727*** (0.128)
Household Assets	1.177*** (0.199)
Constant	-3.990*** (0.210)
Observations	3,909

Standard errors in parentheses
 *** p<0.01, ** p<0.05, * p<0.1

The estimation results from the PSM will be used as the initial assumption to determine the consistency of the calculation of the impact of credit on farmer households. Preliminary results indicate that credit does not affect farmer poverty. Household economic variables such as land ownership, education of the head of the household, and ownership of household assets affect poverty in Indonesian farming households. These results are consistent with findings from Sun et al., (2020) in rural China, and Demissie & Kasie (2017) Ethiopia.

The Impact of Credit on Farmers Household Efforts to Move Out of Multidimensional Poverty

The difference in Differences (DD) estimation is performed as a step to obtain counterfactual value on outcomes. Two groups of households that are characteristic of similarities, namely households that receive credit will be compared for their respective outcomes in the periods before and after receiving credit. Control variables are also included in the DD test to obtain the net effect of credit on household poverty status (outcomes). The use of fixed-effect options is carried out to control unobservable household characteristics and temporal options that can affect the outcome value (Khandker et al., 2010).

Table 4. The Impact of Credit on Multidimensional Poverty of Farmers in Indonesia

VARIABLE	Multidimensional Poverty 0 = poor 1 = not poor		
	Simple Logit	Full Logit	Odds Ratio
period 1= 2014 0= 2007	0.0000536 (0.0000535)	0.000180** (0.0000756)	0.000180** (0.000756)
Credit Treatment 1 = recieve credit 0 = do not receive credit	0.000415** (0.000202)	0.000489* (0.000250)	0.000489* (0.000250)
Credit	-0.224 (0.223)	-0.366 (0.280)	-0.366 (0.280)
KRT Education		3.384*** (0.396)	3.384*** (0.396)
RT assets		1.467*** (0.353)	1.467*** (0.353)
RT Farming Land		0.0901 (0.288)	0.0901 (0.288)
Number of Panels	904	904	904
Number of Poor Farmer of RT	452	452	452

The numbers in parentheses are Standard Error*** p<0.01, ** p<0.05, * p<0.1

The results of the difference in differences analysis, in the form of an assessing the impact of the program on poor farmer households, show the difference in impact before and after they receive credit from formal financial institutions. Table 3 and Table 4 show consistent results where credit has a negative impact on poverty. This means that the head of the poor farmer household who receives credit for agriculture will have the opportunity to move out of poverty. These results are consistent with previous studies by Addury (2019); Coulibaly & Yogo, (2016); Damayanti & Adam, (2015); Sun et al., (2020); Coulibaly & Yogo, (2016). However, although the impact of credit may reduce the probability of poor farmer households emerging from poor status, in fact, the coefficient value is very small. The small impact of credit is due to several factors such as the ceiling given considering that the agricultural sector is relatively avoided due to large risk factors by banks (Arham et al., 2020; Asante-Addo et al., 2017; Sayaka & Rivai, 2011),

In Table 4 the credit treatment coefficient is below 1 percent, either a simple logit test or the addition of other control variables. In fact, other control variables such as education and household asset ownership have a much larger coefficient. Education has three times greater opportunity to help poor farmer households move out of poverty (Psacharopoulos & Patrinos, 2018). Meanwhile, ownership of household assets got them out of poverty 1.4 times faster. This means that there is a need to alleviate multidimensional poverty in farmer's houses, it is not enough just to provide credit but further treats must also be given to human capital capacity in the form of education and household monetary aspects in the form of sufficient assets. Education describes the ability of human capital to understand and solve problems. Higher education shows a person's capacity to overcome and find a way out of a problem (Salam et al., 2020).

An interesting estimation result is the farmer's land ownership. Based on this analysis, land ownership is insignificant, which allows farm households to escape multidimensional poverty. Even though the coefficient

value is positive, it has a probability to escape from multidimensional poverty, the insignificant results show that farmland ownership is not an issue in this study, as long as farmers have access to formal financial institutions, higher education levels, because it will affect the way of thinking and knowledge, as well as owning increasingly large household assets. Increasing household assets gives farmer households flexibility to set up new businesses or as collateral, as well as competitiveness when faced with new capital attempts (Arham et al., 2020).

Table 5. Estimation Results of Difference in Differences

Outcome Variable	Multidimensional Poverty
Before	
Control	0.120
Treated	0.088
Diff (T-C)	-0.032* (0.018)
After	
Control	0.107
Treated	0.079
Diff (T-C)	-0.028** (0.013)
Diff-in-Diff	0.004

The numbers in parentheses are *Standard Error**** p<0.01, ** p<0.05, * p<0.1

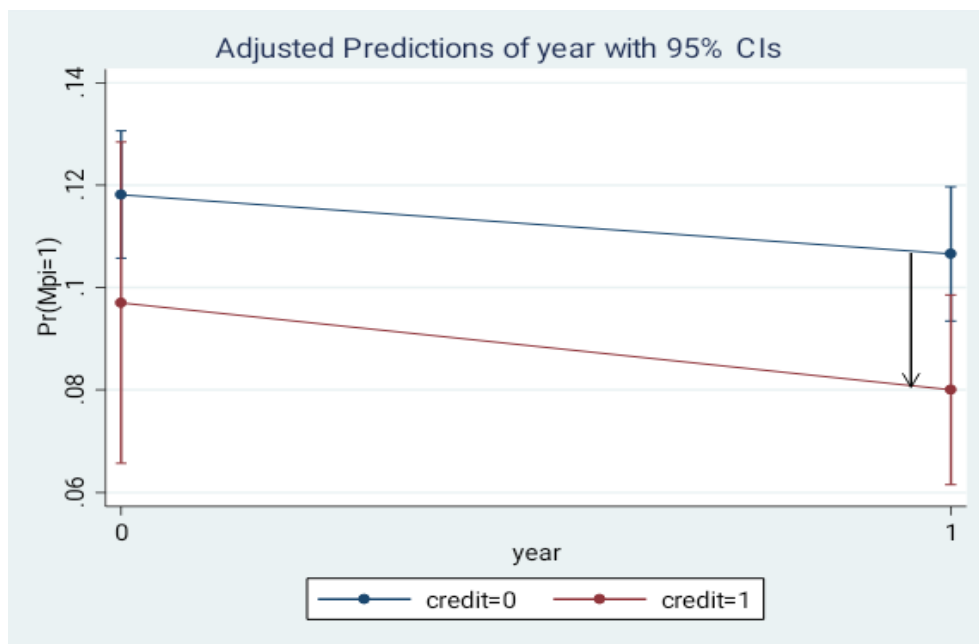


Figure 3. Graph of Differences in Poor Farmer Households After Obtaining Credit

Table 5 and Figure 3 illustrate the differences in the conditions of poor farm households in obtaining credit from formal financial institutions. The calculated differentiation score was 0.004 or 0.4 percent for escape from multidimensional poverty. More clearly, the illustration in Figure 3 shows the shift of the axis from the blue one down to the red one.

CONCLUSION

Based on the results of the research that went through the process of analysis and discussion, the conclusion of this study can be formulated, namely as follows:

1. The Credit Program for poor farmer households has a probability to lift out of multidimensional poverty even though the impact is small.

2. The credit program for farmers cannot operate alone, other aspects must be added, such as improving farmer household education, including increasing household asset ownership so that farmers are able to have competitiveness and access to capital. The small impact of credit on multidimensional poverty reduction efforts is due to several factors such as the ceiling which is generally of small value, and a high risk associated with collateral held by farmer households.
3. Ownership of farmland does not significantly help alleviate multidimensional poverty. This is because the cultivated land area in this study is not implicitly depicted. The binary form implies that the most important is the variable of farmer household asset ownership and the level of education of the farmers.

Thus, after concluding the results of the study, we need to provide some policy proposals that can be made based on the findings, including forming a modern farming group to catalyze farmland ownership. Farmer organizations can be allowed to receive education and knowledge about agriculture and its business. So that farmers are able to master modern agricultural business models and adopt technologies. With access to formal financial institutions, this capital can be converted into investment in agricultural technology and cooperation with research and development institutions in the agricultural sector. So in the future, agriculture may become more modern both in terms of production and business.

ACKNOWLEDGMENT

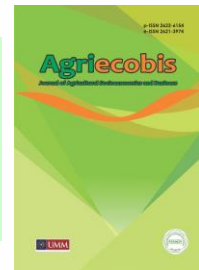
This study was conducted with the help of colleagues at the Research Institute of Socio-Economic Development (RISED). Thank you for helping the author with the discussion process related to the research model. This study was inspired by colleagues who wrote on a related topic and encouraged me to explore a more specific area of research on the impact of credit on poverty in farmer households in Indonesia.

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Artikel Penelitian

Strategi Pemasaran Bekatul Beras Merah Instan di CV. Pantiboga Natural Food Specialist, Kecamatan Matesih, Kabupaten Karanganyar

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ABSTRACT

CV. Pantiboga Natural Food Specialist is a producer of processed products made from brown rice bran and spices, named "Red Bran" instant red rice bran. During running the business, CV. Pantiboga Natural Food Specialist has several problems related to product marketing. This study aims to identify strengths, weakness, opportunities, and threats, formulate alternative marketing strategies, and determining priority strategies that can be applied in the marketing of instant brown rice bran. The basic method used is descriptive analysis. The types of data used are primary and secondary data. Methods of data analysis using matrix analysis of IFE, EFE, Grand Strategy, SWOT, and QSPM. The results of this research show the IFE matrix analysis at CV. Pantiboga Natural Food Specialist is strong in utilizing strengths and overcoming weakness. The EFE matrix also shows that CV. Pantiboga Natural Food Specialist is strong in taking advantage of opportunities and avoiding threats. The SWOT position is in quadrant 1 which supports the company in pursuing an aggressive strategy. The SWOT matrix results obtained four alternative strategies which were then assessed for their attractiveness in the QSPM matrix. The value of attractiveness (TAS) shows the strategic priority by improving product quality in order to maintain customer loyalty and acquire new customers.

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PENDAHULUAN

Sektor pertanian adalah sektor yang memanfaatkan sumber daya alam untuk digunakan dalam berbagai kepentingan manusia. Sektor pertanian terbagi menjadi beberapa subsektor, yaitu subsektor tanaman pangan, subsektor peternakan, subsektor perkebunan, subsektor kehutanan serta subsektor perikanan (Saltar, 2017). Sektor pertanian khususnya subsektor tanaman pangan memegang peranan penting sebagai pemasok kebutuhan konsumsi penduduk. Padi (*Oryza sativa*, L) merupakan salah satu tanaman pangan yang menjadi makanan pokok sebagian besar penduduk Indonesia. Menurut data Kementerian Pertanian Republik Indonesia (2018), jumlah penduduk Indonesia pada tahun 2017 adalah 262 juta jiwa maka rata-rata konsumsi beras sebesar 114,6 kg/kg/kapita/tahun. Padi (*Oryza sativa*, L) memiliki bentuk dan warna yang beragam, baik tanaman maupun berasnya. Di Indonesia terdapat padi yang warna berasnya putih (*Oryza sativa*, L), beras

merah (*Oryza nirvara*), dan beras hitam (*Oryza sativa L. Indica*) (Hernawan & Meylani, 2016). Jenis beras yang menjadi komoditas utama di Indonesia yaitu beras putih. Namun akhir-akhir ini, ketertarikan terhadap beras merah mulai meningkat.

Dedak padi atau bekatul adalah lapisan coklat luar dari padi yang dihilangkan selama proses penggilingan biji-bijian coklat (Salem et al., 2014). Dedak padi halus (bekatul) itu berasal dari polesan padi yang terdiri dari lapisan dedak *cotyledon*, sekam kecil, dan beras rusak melalui proses kedua (Yamin et al., 2020). Walaupun termasuk produk sampingan penggilingan, tetapi bekatul mempunyai kandungan vitamin dan mineral alami yang tinggi, terutama vitamin E. Bekatul salah satu produk dari beras giling yang diperoleh dari lapisan luar dari beras merah selama penggilingan (Lavanya et al., 2019). Pada proses penggilingan padi menjadi beras giling, akan diperoleh hasil samping berupa sekam (15-20%), dedak/bekatul (8-12%) dan menir ($\pm 5\%$) (Widowati, 2020).

Bekatul yang dihasilkan dari penggilingan padi dapat digunakan sebagai pakan ternak. Bekatul beras merah merupakan hasil dari proses penggilingan padi beras merah pada bagian terluar atau kulit ari beras merah dengan bentuk serbuk halus berwarna *cream* atau coklat muda. Upaya pemanfaatan bekatul sebagai pangan fungsional masih terhalang beberapa kendala, antara lain kurangnya kesadaran masyarakat tentang manfaat bekatul bagi kesehatan dan belum banyak industri hilir yang tertarik untuk mengembangkan bekatul (Tuarita et al., 2017). Salah satu cara mengembangkan bekatul beras merah adalah dengan membuat produk makanan atau minuman berbahan dasar bekatul beras merah melalui kegiatan agroindustri. Agroindustri merupakan proses menciptakan nilai yang lebih dari suatu produk pertanian yang meliputi kegiatan pengolahan hingga pendistribusian hasil produksi.

Pemasaran merupakan salah satu kegiatan pokok yang dilakukan oleh agroindustri untuk menghadapi persaingan dan mempertahankan kelangsungan hidup usahanya agar bisa terus berkembang. Pemasaran juga membantu agroindustri dalam menjual produk dan memperoleh laba sesuai dengan keinginan. Pemasaran adalah proses sosial dan manajerial dimana pribadi atau organisasi memperoleh apa yang mereka butuhkan dan inginkan melalui penciptaan dan pertukaran nilai (Kotler & Armstrong, 2008). Kegiatan bauran pemasaran melibatkan persepsi konsumen (Khandelwal et al., 2020) yang berfokus pada elemen program pemasaran dengan iklan atau strategi produk yang diutamakan (Samiee & Chirapanda, 2019). Selain itu, proses pemasaran harus direncanakan melalui strategi pemasaran yang baik yaitu dengan menganalisis yang menjadi peluang dan menetapkan tujuan untuk mengembangkan strategi pemasaran (Soegoto & Utomo, 2019). Mengembangkan dan menjalankan strategi pemasaran merupakan pusat dari praktik pemasaran (Morgan et al., 2019).

CV. Pantiboga Natural Food Specialist merupakan agroindustri bekatul beras merah yang terletak di Kecamatan Matesih, Kabupaten Karanganyar, Jawa Tengah. Bekatul beras merah tersebut dijual dengan merk *Red Bran*. *Red Bran* adalah produk berbahan baku serbuk bekatul beras merah dan serbuk beras merah yang diberi tambahan rempah-rempah seperti seperti jahe merah, kencur, dan jinten hitam dikemas dalam suatu kemasan siap saji. Data penjualan produk bekatul beras merah CV. Pantiboga Natural Food Specialist dapat dilihat pada Tabel 1.

Tabel 1. Jumlah Produksi & Penjualan Produk Bekatul Beras Merah Instan Tahun 2018

No	Bulan	Jumlah Penjualan Produk					
		Red Bran (200 gram)/pack		Red Bran (500 gram)/pack		Red Bran (100 gram)/ pack	
		Produksi	Terjual	Produksi	Terjual	Produksi	Terjual
1.	Januari	450	450	300	275	450	350
2.	Februari	400	350	300	300	450	400
3.	Maret	450	450	300	280	400	360
4.	April	450	430	350	300	450	400
5.	Mei	500	400	300	300	400	280
6.	Juni	400	300	350	320	400	350
7.	Juli	350	320	250	250	450	300
8.	Agustus	350	250	250	230	450	422
9.	September	400	325	350	300	400	400
10.	Oktober	400	280	200	200	500	452
11.	November	300	300	200	175	400	345
12.	Desember	400	350	300	200	400	325
Jumlah		4850	4205	3450	3130	5150	4384

Sumber: CV. Pantiboga Natural Food Specialist

CV. Pantiboga Natural Food Specialist dapat memproduksi bekatul beras merah sekitar 900-1200 kemasan dalam sebulan, tergantung pesanan konsumen. Bekatul beras merah tersebut dijual dalam kemasan sachet, plastik besar dan kardus. Beras merah sebagai bahan baku pembuatan produk bekatul beras merah diperoleh dari mitra petani di daerah Matesih, Karangpandan, Boyolali, Ambarawa, dan Klaten. Pemasaran produk bekatul beras merah instan yaitu dengan melakukan pengiriman produk kepada pelanggan. Selain itu, CV. Pantiboga Natural Food Specialist juga melayani pembelian secara langsung kepada konsumen yang datang ke tempat produksi. Perusahaan memasarkan produk bekatul beras merah instan ini ke beberapa daerah, seperti Semarang, Yogyakarta, Purwokerto, Bali, hingga luar Jawa. Perusahaan memiliki beberapa distributor dan agen. Produk juga disalurkan ke klinik kesehatan dan apotek di wilayah Soloraya.

CV. Pantiboga Natural Food Specialist merupakan unit usaha keluarga yang dikelola bersama sejak tahun 2010. Sejak awal berdiri hingga tahun 2018 (kurang lebih 8 tahun), pemasaran bekatul beras merah instan terbilang lambat. Apabila dilihat dari jumlah penjualannya juga tidak mengalami peningkatan yang signifikan. Berdasarkan data pada Tabel 1. Menunjukkan bahwa bekatul beras merah instan *Red Bran* yang diproduksi tidak seluruhnya dapat terjual. Total penjualan ketiga varian produk bekatul beras merah *Red Bran* selama tahun 2018 jumlahnya lebih rendah dibandingkan dengan total jumlah produksinya.

Produk bekatul beras merah instan memiliki potensi dan peluang untuk dipasarkan mengingat produk tersebut memiliki banyak manfaat bagi kesehatan. Hal itu membuat masyarakat tertarik untuk mengonsumsi produk ini sebagai suplemen kesehatan. Di sisi lain, mulai muncul beberapa pesaing produk bekatul beras merah di daerah Soloraya dan Sukoharjo. Kondisi tersebut membuat CV. Pantiboga Natural Food Specialist harus mempertahankan usahanya dalam jangka panjang melihat sudah adanya beberapa pesaing yang membuka usaha dengan produk berbahan baku sama. Memahami lingkungan persaingan CV. Pantiboga Natural Food Specialist, maka dapat dijadikan suatu informasi untuk meningkatkan pemasaran produk tersebut. CV. Pantiboga Natural Food Specialist perlu menentukan strategi pemasaran agar produk bekatul beras merah instan dapat lebih dikenal oleh masyarakat luas sehingga dapat bersaing di pasar dan berdampak positif terhadap penjualan produk.

Beberapa penelitian terdahulu yang dipilih untuk menjadi acuan dalam penelitian ini adalah penelitian dari Lisarini (2015) tentang bauran pemasaran pada strategi pemasaran produk bekatul instan yang berkontribusi dalam pemilihan objek penelitian. Penelitian dari Idris (2015), tentang strategi pengembangan di Industri Meubel Rotan yang berkontribusi dalam pemilihan lokasi penelitian secara sengaja (*purposive*) dan pemahaman tentang Matriks Grand Strategi. Penelitian dari Zulkifli *et al.* (2015), tentang strategi pemasaran

beras organik di kelompok tani Sri Makmur Kota Sragen, yang berkontribusi dalam penggunaan metode analisis data matriks EFE, matriks IFE, matriks SWOT.

Penelitian (Harisudin, 2019a), yang serupa yaitu merumuskan dan menentukan strategi pengembangan pada produksi olahan ikan lele dan berkontribusi dalam memberikan pemahaman tentang matriks SWOT dan metode QSPM. Kebaharuan dari penelitian ini adalah dari objek dan lokasi penelitian, yaitu produk bekatul beras merah instan di CV. Pantiboga Natural Food Specialist Kecamatan Matesih Kabupaten Karanganyar yang menggunakan beberapa analisis matriks EFE, matriks IFE, Matriks Grand Strategi, matriks SWOT dan metode QSPM. Berdasarkan uraian tersebut tujuan penelitian ini untuk mengidentifikasi dan merumuskan faktor internal dan eksternal CV. Pantiboga Natural Food Specialist, merumuskan alternatif strategi pemasaran dan menentukan prioritas strategi pemasaran bekatul beras merah *Red Bran* di CV. Pantiboga Natural Food Specialist.

METODE

Metode dasar yang digunakan dalam penelitian ini adalah metode deskriptif analitis, dengan melakukan studi kasus di CV. Pantiboga Natural Food Specialist di Kecamatan Matesih, Kabupaten Karanganyar. Penentuan lokasi penelitian ini dilakukan secara *purposive*. Metode *purposive* merupakan penentuan daerah penelitian yang diambil secara sengaja berdasarkan kepada pertimbangan tertentu atau ciri-ciri yang dimiliki subyek yang dipilih sesuai dengan tujuan penelitian (Herdiansyah, 2012). CV. Pantiboga Natural Food Specialist merupakan satu-satunya agroindustri bekatul beras merah instan di Kecamatan Matesih, Kabupaten Karanganyar. Waktu penelitian dilaksanakan pada Bulan Maret sampai Bulan Mei 2019. Responden dalam penelitian ini dipilih secara sengaja (*purposive*). Hal ini dikarenakan menggunakan metode *purposive* adalah teknik pengambilan sampel sumber data dengan pertimbangan tertentu yaitu orang tersebut dianggap paling tahu tentang obyek penelitian. Penentuan Responden untuk Perumusan Strategi dibagi menjadi tiga tahap.

a. Penentuan Informan Tahap I: Identifikasi Faktor Internal dan Faktor Eksternal.

Informasi mengenai faktor-faktor internal dan eksternal diperoleh melalui wawancara secara mendalam (*indepth interview*) dengan informan kunci (*key informan*). Informan penelitian ini meliputi pemilik CV. Pantiboga Natural Food Specialist, manajer, konsumen, perantara konsumen, pemasok bahan baku, pesaing, dan Dinas Perindustrian Perdagangan Tenaga Kerja, Koperasi dan UKM Kabupaten Karanganyar. Informasi dari *key informan* akan diidentifikasi menjadi kekuatan, kelemahan, peluang dan ancaman. Hasil identifikasi faktor eksternal dan internal dari semua informan selanjutnya diintegrasikan dengan teknik triangulasi sumber. Triangulasi sumber berarti untuk mendapatkan data dari sumber yang berbeda-beda dengan teknik yang sama (Sugiyono, 2013).

b. Penentuan Informan Tahap II: Pemberian Bobot dan Rating pada Matriks IFE dan EFE

Penetapan skor bobot dan rating matriks IFE dan EFE membutuhkan kontribusi dari para ahli, yaitu informan yang dianggap mengetahui keadaan dan intensif dalam kegiatan. Informan yang dipilih ada 3 informan yaitu pemilik dan manajer CV. Pantiboga Natural Food Specialist, serta Dinas Perdagangan Tenaga Kerja Koperasi Usaha Kecil dan Menengah Kabupaten Karanganyar selaku pembuat kebijakan.

c. Penentuan Informan Tahap III: Perumusan Alternatif Strategi dan Prioritas Strategi.

Prioritas strategi diperoleh dari matriks *Grand Strategy* dan matriks SWOT serta penentuan nilai daya tarik untuk matriks QSPM oleh pemilik CV. Pantiboga Natural Food Specialist dengan pertimbangan bahwa pemilik usaha mengetahui keadaan Perusahaan agar selanjutnya hasil strategi dari matriks QSPM bisa diterapkan oleh Perusahaan.

HASIL DAN PEMBAHASAN

Analisis faktor eksternal dan internal bekatul beras merah instan di CV. Pantiboga Natural Food Specialist

Analisis faktor eksternal merupakan faktor yang berasal dari luar suatu agroindustri. Analisis faktor eksternal bertujuan untuk mengidentifikasi daftar terbatas faktor-faktor keberhasilan penting yang menjadi peluang dan ancaman (Harisudin, 2019b). Faktor eksternal yang dianalisis pada penelitian ini antara lain pemasok (bermitra dengan petani), perantara pemasaran (distributor, agen, dan pengecer), konsumen (yang berasal dari dalam negeri maupun luar negeri, pesaing, pemerintah, ekonomi, dan sosial budaya).

Faktor eksternal pemasaran Bekatul Beras Merah Instan pada CV. Pantiboga Natural Food Specialist diidentifikasi untuk mengetahui faktor-faktor yang menjadi peluang dan ancaman, serta membantu dalam pengelompokan faktor-faktor tersebut. Hasil analisis triangulasi sumber diperoleh hasil sebagai berikut : faktor strategis yang berupa peluang adalah jaminan ketersediaan bahan baku dari beberapa pemasok beras merah, peluang pemasaran yang terhubung luas, kepercayaan konsumen terhadap produk, tidak ada agroindustri yang sama di daerah setempat, adanya dukungan pemerintah daerah melalui pameran yang diadakan rutin tiap tahun, masyarakat yang sudah menerapkan tren gaya hidup *back to nature*.

Peluang dari faktor eksternal ekonomi ini tidak ada karena kondisi ekonomi dapat berubah dan tidak dapat diprediksi. Perubahan keadaan ekonomi paling dirasakan oleh masyarakat luas saat kenaikan atau penurunan harga sembako, harga barang-barang yang lain akan berubah sesuai pergerakan harga tersebut (Lewi, 2015). Faktor strategis yang menjadi ancaman meliputi: jenis bahan baku yang beragam dari beberapa pemasok beras merah, keterlambatan pembayaran oleh *reseller*, munculnya produk sejenis di luar daerah produksi, produk pesaing memiliki kemasan kardus lebih tebal dan aman, ancaman yang muncul adalah harga kebutuhan pokok yang fluktuatif, adanya *mindset* sebagian masyarakat bahwa bekatul adalah sebagai pakan ternak. Tidak adanya ancaman dari faktor eksternal konsumen dan pemerintah karena produk bekatul beras merah merupakan produk fungsional yang bermanfaat bagi kesehatan. Pemerintah daerah Kabupaten Karanganyar juga selalu mendukung produk tersebut dalam pameran produk. Hasil identifikasi faktor-faktor strategis eksternal pemasaran Bekatul Beras Merah Instan dapat dilihat pada Tabel 2.

Tabel 2. Hasil Identifikasi Faktor Eksternal CV. Pantiboga Natural Food Specialist.

No.	Faktor Eksternal	Peluang	Ancaman
1.	Pemasok	– Jaminan ketersediaan bahan baku dari beberapa pemasok beras merah	– Jenis bahan baku yang beragam dari beberapa pemasok beras merah.
2.	Perantara Pemasaran	– Peluang pemasaran yang terhubung luas	– Keterlambatan pembayaran oleh <i>reseller</i>
3.	Konsumen	– Kepercayaan konsumen terhadap produk	
4.	Pesaing	– Tidak ada agroindustri yang sama di daerah setempat	– Munculnya produk sejenis di luar daerah produksi – Produk pesaing memiliki kemasan kardus lebih tebal dan aman
5.	Pemerintah	– Adanya dukungan pemerintah daerah melalui pameran yang diadakan rutin tiap tahun	
6.	Ekonomi		– Harga kebutuhan pokok yang fluktuatif
7.	Sosial Budaya	– Masyarakat yang sudah menerapkan tren gaya hidup <i>back to nature</i>	– Adanya <i>mindset</i> sebagian masyarakat bahwa bekatul adalah sebagai pakan ternak

Sumber: Analisis Data Primer, 2019

Analisis faktor internal merupakan lingkungan yang berasal dari dalam suatu organisasi dan dapat dikendalikan oleh organisasi tersebut. Faktor internal dalam pemasaran CV. Pantiboga Natural Food Specialist yaitu produk, harga, distribusi, promosi. Identifikasi faktor internal akan menghasilkan kekuatan dan kelemahan dari pemasaran bekatul beras merah instan. Kekuatan dan kelemahan tersebut akan berpengaruh pada proses perumusan strategi pemasaran. Hasil analisis triangulasi sumber diperoleh sebagai berikut: faktor strategis yang berupa kekuatan atau keunggulan CV. Pantiboga Natural Food Specialist adalah Produk bekatul beras merah instan adalah produk fungsional yang memiliki banyak manfaat dan khasiat, kemasan dan ukuran produk bervariasi, memiliki izin P-IRT dan sertifikat halal, tanpa pengawet dan tanggal kadaluwarsa sampai 1 tahun, harga produk bersaing dan sesuai dengan kualitas, jawa dan luar negeri, promosi secara *offline* dan *online*. Hasil identifikasi faktor-faktor strategis internal CV. Pantiboga Natural Food Specialist dapat dilihat pada Tabel 3.

Tabel 3. Faktor Kekuatan dan Kelemahan CV. Pantiboga Natural Food

No.	Faktor Internal	Kekuatan	Kelemahan
1.	Produk	<ul style="list-style-type: none"> - Produk bekatul beras merah instan adalah produk fungsional yang memiliki banyak manfaat dan khasiat - Kemasan dan ukuran produk bervariasi - Memiliki izin P-IRT dan sertifikat halal - Tanpa pengawet dan tanggal kadaluwarsa sampai 1 tahun 	<ul style="list-style-type: none"> - Rasa produk yang agak tawar bagi konsumen pemula - Kemasan rawan rusak saat pengiriman ke luar pulau Jawa/ luar negeri
2.	Harga	<ul style="list-style-type: none"> - Harga produk bersaing dan sesuai dengan kualitas 	
3.	Distribusi	<ul style="list-style-type: none"> - Distribusi produk sudah sampai ke luar pulau Jawa dan luar negeri 	<ul style="list-style-type: none"> - Jumlah transportasi terbatas
4.	Promosi	<ul style="list-style-type: none"> - Promosi secara <i>offline</i> dan <i>online</i> 	<ul style="list-style-type: none"> - SDM untuk kegiatan promosi terbatas - Jadwal promosi yang belum rutin

Sumber: Analisis Data Primer, 2019

Strategi pemasaran bekatul beras merah instan pada cv. pantiboga natural food specialist
Matriks EFE (*Eksternal Factor Evaluation*)

Matriks EFE (*Eksternal Factor Evaluation*) digunakan untuk menganalisis faktor-faktor eksternal pada strategi pemasaran bekatul beras merah instan pada CV. Pantiboga Natural Food Specialist dan mengklasifikasikannya menjadi peluang dan ancaman, kemudian dilakukan pembobotan dan rating. Penetapan bobot dilakukan dengan pemilik dan manajer CV. Pantiboga Natural Food Specialist serta pemerintah setempat melalui wawancara. Berikut adalah tabel 4 tentang bobot dan rating dari faktor-faktor eksternal:

Tabel 4. Matriks EFE Pemasaran Bekatul Beras Merah Instan CV. Pantiboga Natural Food Specialist

No.	Faktor Eksternal	Bobot	Rating	Skor
Peluang				
1.	Jaminan ketersediaan bahan baku dari pemasok bahan baku.	0,084	4	0,336
2.	Peluang pasar yang terhubung luas	0,088	4	0,352
3.	Kepercayaan konsumen terhadap produk	0,074	3	0,222
4.	Tidak ada agroindustri yang sama di daerah setempat	0,08	4	0,320
5.	Adanya dukungan pemerintah daerah melalui pameran yang diadakan rutin tiap tahun	0,083	3	0,249
6.	Masyarakat yang sudah menerapkan tren gaya hidup <i>back to nature</i>	0,089	3	0,267
Jumlah				1,746
Ancaman				
1.	Kualitas bahan baku yang beragam	0,085	1	0,085
2.	Keterlambatan pembayaran oleh perantara pemasaran	0,084	2	0,168
3.	Mulai munculnya produk bekatul instan di luar daerah	0,089	3	0,267
4.	Harga kebutuhan pokok, bahan baku dan bahan pendukung produksi yang fluktuatif.	0,079	3	0,237
5.	Adanya pemikiran sebagian masyarakat bahwa bekatul adalah sebagai pakan ternak	0,087	2	0,174
6.	Kemasan produk pesaing yang lebih bagus dan menarik	0,078	2	0,156
Jumlah				1,087
Jumlah Total		1		2,833

Sumber: Analisis Data Primer, 2019

Berdasarkan hasil perhitungan matriks EFE, diperoleh skor total sebesar 2,833. Skor total tersebut berada di atas 2,5 yang berarti posisi eksternal CV. Pantiboga Natural Food Specialist dikategorikan kuat (David & David, 2017). Hal ini berarti CV. Pantiboga Natural Food Specialist secara efektif mampu menarik keuntungan dari peluang yang ada dan meminimalkan pengaruh negatif dari ancaman eksternal. CV. Pantiboga Natural Food Specialist mempunyai peluang pemasaran yang responsif terhadap ancaman yang ada.

Matriks IFE (*Internal Factor Evaluation*)

Matriks IFE (*Internal Factor Evaluation*) digunakan untuk menganalisis faktor-faktor internal dan mengklasifikasikannya menjadi kekuatan dan kelemahan bagi strategi pemasaran bekatul beras merah instan pada CV. Pantiboga Natural Food Specialist, kemudian dilakukan pembobotan dan rating. Penetapan bobot dilakukan dengan pemilik dan manajer CV. Pantiboga Natural Food Specialist serta pemerintah setempat melalui wawancara. Berikut adalah tabel 5 yang berisi skor bobot dan rating dari faktor-faktor internal.

Berdasarkan nilai skor matriks IFE tersebut mengidentifikasi bahwa skor bobot total di atas 2,5 mencirikan organisasi yang kuat secara internal (David, 2009). Sehingga dapat dikatakan bahwa CV. Pantiboga Natural Food Specialist mampu menarik keuntungan dari peluang yang ada dan meminimalkan pengaruh negatif dari ancaman eksternal. Artinya CV. Pantiboga Natural Food Specialist kekuatan pemasaran yang kuat sehingga dapat meminimalkan ancaman.

Tabel 5. Matriks IFE Pemasaran Bekatul Beras Merah Instan CV. Pantiboga Natural Food Specialist

No.	Faktor internal	Bobot	Rating	Skor
Kekuatan				
1.	Produk bekatul beras merah instan adalah produk fungsional yang memiliki banyak manfaat dan khasiat	0,082	4	0,328
2.	Kemasan dan ukuran produk bervariasi	0,089	3	0,267
3.	Memiliki izin P-IRT dan sertifikat halal	0,072	4	0,288
4.	Tanpa pengawet dan tanpa kadaluwarsa sampai 1 tahun	0,081	4	0,324
5.	Harga produk bersaing dan sesuai dengan kualitas	0,087	3	0,261
6.	Distribusi produk sudah sampai ke luar pulau Jawa dan luar negeri	0,089	3	0,267
7.	Promosi secara <i>offline</i> dan <i>online</i>	0,076	3	0,228
Jumlah				1,963
Kelemahan				
1.	Rasa produk yang agak tawar	0,087	2	0,174
2.	Kemasan rawan rusak saat pengiriman ke luar pulau Jawa/ luar negeri	0,075	2	0,15
3.	Jumlah transportasi terbatas	0,103	2	0,206
4.	SDM untuk kegiatan promosi dan pemasaran terbatas	0,078	1	0,078
5.	Jadwal promosi yang tidak rutin	0,081	2	0,162
Jumlah				0,77
Jumlah Total		1		2,733

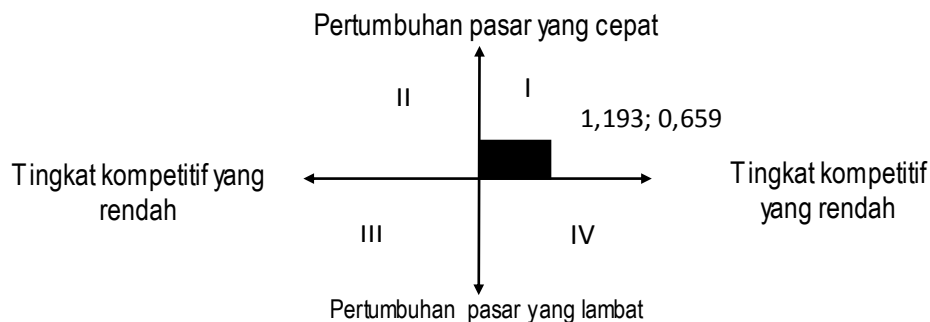
Sumber: Analisis Data Primer, 2019

Matriks Strategi Besar (*Grand Strategy Matrix*)

Penentuan posisi Perusahaan dilakukan dengan cara memadukan variabel kekuatan, kelemahan, peluang dan ancaman yang dimiliki Perusahaan sehingga dapat ditentukan titik koordinat dalam diagram SWOT. Perhitungan nilai faktor internal CV. Pantiboga Natural Food Specialist diperoleh dari pengurangan antara faktor kekuatan (*Strengths*) dan kelemahan (*Weakness*) yaitu $1,963 - 0,770 = 1,193$ yang dijadikan sumbu horizontal atau sumbu x. Hal itu menunjukkan bahwa sumbu x bernilai positif (+). Perhitungan nilai faktor eksternal CV. Pantiboga Natural Food Specialist dari nilai pengurangan antara faktor peluang (*Opportunities*) dan nilai ancaman yaitu $1,746 - 1,087 = 0,659$ yang dijadikan sumbu horizontal atau sumbu y. Hal itu menunjukkan bahwa sumbu y bernilai positif (+). Sehingga CV. Pantiboga Natural Food Specialist berada pada kuadran I. Kondisi ini mendukung CV. Pantiboga Natural Food Specialist melakukan strategi yang agresif. Strategi agresif yang dapat dipakai oleh Perusahaan meliputi strategi pengembangan produk, strategi pengembangan pasar, strategi penetrasi pasar, strategi integrasi ke belakang, atau strategi integrasi

ke depan, Berdasarkan perhitungan faktor internal dan faktor eksternal tersebut, maka dapat diketahui posisi CV. Pantiboga Natural Food Specialist.

Berdasarkan perhitungan faktor internal dan faktor eksternal tersebut, maka dapat diketahui posisi CV. Pantiboga Natural Food Specialist adalah sebagai berikut:



Gambar 2. Posisi CV. Pantiboga Natural Food Specialist

Matriks SWOT (*Strength, Weakness, Opportunities, Threat*)

Berdasarkan hasil dari matriks grand strategi, posisi strategi pemasaran bekatul beras merah di CV. Pantiboga Natural Food Specialist berada pada kuadran I. Posisi pada kuadran I pada matriks *grand strategi*, menunjukkan rumusan strategi yang dilakukan berdasarkan pada kekuatan (internal) dan peluang (ancaman). Analisis tersebut menjadi acuan untuk menentukan alternatif strategi pemasaran bekatul beras merah, yakni pada strategi SO (kekuatan-peluang). Alternatif strategi SO dalam pemasaran bekatul beras merah instan pada CV. Pantiboga Natural Food Specialist dapat dilihat pada Tabel 6.

Tabel 6. Matriks SWOT Pemasaran Bekatul Beras Merah Instan pada CV. Pantiboga Natural Food Specialist

Faktor Internal	<p>Kekuatan/Strengths (S)</p> <ol style="list-style-type: none"> 1. Merupakan produk pangan fungsional 2. Kemasan dan ukuran produk bervariasi 3. Memiliki izin P-IRT dan sertifikat halal 4. Harga produk bersaing dengan produk lain yang serupa 5. Harga produk bervariasi dan sesuai dengan kualitas 6. Pengiriman produk sampai ke luar Jawa dan luar negeri 7. Promosi secara <i>offline</i> dan <i>online</i>
Faktor Eksternal	
<p>Peluang/Opportunity (O)</p> <ol style="list-style-type: none"> 1. Jaminan ketersediaan bahan baku dari mitra petani 2. Peluang pasar terhubung luas 3. Kepercayaan konsumen yang tinggi 4. Tidak ada agroindustri yang sama di daerah setempat 5. Dukungan pemerintah lewat pameran produk 6. Tren gaya hidup <i>back to nature</i> 	<p>Strategi S-O</p> <ol style="list-style-type: none"> 1. Meningkatkan kualitas dalam mempertahankan loyalitas pelanggan dan memperoleh pelanggan baru (S₁₂₃₄₅O₁₂₃₄₆) 2. Menambah kerja sama dengan perantara pemasaran dan memanfaatkan peluang pasar serta tren <i>back to nature</i> guna memperluas jaringan pasar dan distribusi produk (S₁₃₆O₂₄₆) 3. Meningkatkan kegiatan promosi <i>online</i> dan <i>offline</i> dengan memberi pelatihan kepada karyawan dan memanfaatkan dukungan pemerintah (S₆₇O₄₅) 4. Menambah varian produk lain untuk menjangkau konsumen di berbagai kalangan (S₁₂₃₅O₂₃₆)

Sumber: Analisis Data Primer, 2019

Perumusan alternatif strategi pemasaran bekatul beras merah instan CV. Pantiboga Natural Food Specialist merujuk pada posisi perusahaan yang telah dianalisis dalam Matriks *Grand Strategy* yaitu pada kuadran I. Hasil tersebut sejalan dengan penelitian Feriyanto (Feriyanto, 2017), posisi usaha Darma Karya di kuadran I dapat dilaksanakan dengan melakukan strategi pengembangan pasar dan strategi pengembangan produk. Sedangkan strategi yang dapat dirumuskan untuk CV. Pantiboga Natural Food Specialist adalah

strategi pengembangan produk yaitu meningkatkan kualitas dalam mempertahankan loyalitas pelanggan dan memperoleh pelanggan baru, menambah varian produk lain untuk menjangkau konsumen di berbagai kalangan. Strategi pengembangan pasar yang dirumuskan yaitu menambah kerja sama dengan perantara pemasaran dan memanfaatkan peluang pasar serta tren *back to nature* guna memperluas jaringan pasar dan distribusi produk, meningkatkan kegiatan promosi *online* dan *offline* dengan memberi pelatihan kepada karyawan dan memanfaatkan dukungan pemerintah. Pengembangan pasar dapat dilakukan dengan memperluas jaringan pemasaran dan distribusi (Lubis et al., 2019).

Prioritas Strategi Pemasaran Bekatul Beras Merah Instan CV. Pantiboga Natural Food Specialist

Penentuan prioritas strategi pemasaran dapat dilakukan dengan menggunakan Matriks QSP (*Quantitative Strategic Planning Matriks*) sebagai alat analisis. Matriks QSP memperlihatkan tingkat kemenarikan dari setiap alternatif strategi atau STAS (*Sum Total Attractiveness Score*). Strategi yang memiliki tingkat kemenarikan tertinggi menunjukkan strategi dengan STAS tertinggi. Strategi tersebut lah yang kemudian diprioritaskan. Matriks QSP merupakan alat analisis untuk melakukan evaluasi alternatif strategi secara objektif, berdasarkan faktor-faktor keberhasilan penting eksternal dan internal yang telah diidentifikasi sebelumnya. Keempat alternatif strategi pemasaran CV. Pantiboga Natural Food Specialist tersebut kemudian digambarkan dalam Tabel 7.

Tabel 7. Matriks QSP Pemasaran Bekatul Beras Merah Instan CV. Pantiboga Natural Food Specialist.

Faktor-faktor kunci	Bobot	Alternatif Strategi							
		I		II		III		IV	
		AS	TAS	AS	TAS	AS	TAS	AS	TAS
Faktor Internal Kekuatan									
1. Merupakan produk fungsional yang memiliki manfaat & khasiat	0,082	4	0,328	2	0,164	3	0,246	1	0,082
2. Kemasan dan ukuran produk bervariasi	0,089	4	0,356	3	0,267	2	0,178	1	0,089
3. Memiliki izin P-IRT dan sertifikat halal	0,072	4	0,288	2	0,144	3	0,216	1	0,072
4. Tanpa pengawet dan tanggal kadaluwarsa sampai 1 tahun	0,081	4	0,324	2	0,162	3	0,243	1	0,081
5. Harga produk bersaing dengan produk lain yang serupa	0,087	1	0,087	3	0,261	4	0,348	2	0,174
6. Pengiriman produk sampai ke luar jawa dan luar negeri	0,089	3	0,267	4	0,356	2	0,178	1	0,089
7. Promosi melalui testimoni pelanggan dan tester produk secara gratis	0,076	3	0,228	1	0,076	2	0,152	4	0,304
Kelemahan									
1. Rasa produk yang agak tawar	0,087	4	0,348	2	0,174	3	0,261	1	0,087
2. Kemasan yang rawan rusak dalam pengiriman jarak jauh	0,075	4	0,3	3	0,225	2	0,15	1	0,075
3. Jumlah transportasi terbatas	0,103	2	0,206	4	0,412	1	0,103	3	0,309
4. Belum ada karyawan/tim khusus untuk promosi dan pemasaran	0,078	2	0,156	3	0,234	1	0,078	4	0,312
5. Jadwal promosi yang tidak rutin	0,081	2	0,162	3	0,243	1	0,081	4	0,324
Total	1								
Faktor Eksternal Peluang									
1. Ketersediaan bahan baku dari mitra petani	0,084	4	0,336	1	0,084	3	0,252	2	0,168
2. Peluang pasar terhubung luas	0,088	3	0,264	4	0,352	1	0,088	2	0,176
3. Kepercayaan konsumen yang tinggi	0,074	4	0,296	2	0,148	1	0,074	3	0,222
4. Tidak agroindustri yang sama di daerah setempat	0,08	2	0,16	3	0,24	1	0,08	4	0,32
5. Dukungan pemerintah lewat pameran produk	0,083	3	0,249	1	0,083	2	0,166	4	0,332
6. Tren gaya hidup back to nature	0,089	2	0,178	4	0,356	1	0,089	3	0,267
Ancaman									
7. Kualitas bahan baku yang beragam	0,085	1	0,34	1	0,085	3	0,255	2	0,17
8. Keterlambatan pembayaran oleh agen/perantara pemasaran	0,084	3	0,168	4	0,336	1	0,084	3	0,252
9. Munculnya produk baru serupa di luar daerah	0,089	2	0,267	4	0,356	2	0,178	1	0,089
10. Harga kebutuhan pokok yang fluktuatif	0,079	2	0,079	2	0,158	4	0,316	3	0,237
11. Adanya mindset bahwa bekatul sebagai pakan ternak	0,087	2	0,174	3	0,261	1	0,087	4	0,348
12. Kemasan produk pesaing yang lebih bagus dan menarik	0,078		0,234		0,156		0,078		0,312
Total	1								
Total TAS			5,795		5,333		3,981		4,891

Sumber: Analisis Data Primer, 2019

Berdasarkan hasil perhitungan dalam matriks QSP pada Tabel 7 dapat diketahui nilai daya tarik pada keempat strategi. Total nilai tertinggi yang diperoleh adalah strategi I dengan skor 5,795. Strategi I meningkatkan kualitas produk dalam mempertahankan loyalitas pelanggan dan memperoleh pelanggan baru.

Strategi I memperoleh total nilai daya tarik tertinggi, hal ini berarti strategi meningkatkan kualitas produk dalam mempertahankan loyalitas pelanggan dan memperoleh pelanggan baru menjadi prioritas strategi yang cocok diterapkan oleh CV. Pantiboga Natural Food Specialist. Perusahaan perlu meningkatkan kualitas produk bekatul beras merah instan mulai dari proses penggilingan beras merah, pengolahan bekatul hingga proses pengemasan dengan menerapkan SOP produksi yang telah ditetapkan. Strategi tersebut sejalan dengan penelitian Sari et al. (Sari et al., 2015) bahwa perusahaan harus selalu menjaga kualitas produk. Berdasarkan strategi I, perusahaan perlu mempertahankan ciri khas produk bekatul beras merah instan yaitu dengan menggunakan bahan rempah-rempah alami dan tidak menggunakan bahan pengawet agar tidak mengurangi manfaat. Dari segi *packaging*, perusahaan dapat meningkatkan kemasan produk dengan menggunakan kardus yang lebih tebal agar produk tidak rusak saat didistribusikan ke luar daerah atau ke luar negeri.

KESIMPULAN

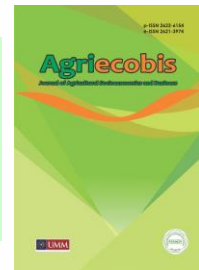
Hasil penelitian menunjukkan bahwa CV. Pantiboga Natural Food Specialist memiliki kekuatan yang lebih besar daripada nilai kelemahannya. Posisi CV. Pantiboga Natural Food Specialist berada pada kuadran 1 yang mendukung perusahaan melakukan strategi agresif. Strategi agresif meliputi strategi pengembangan produk, pengembangan pasar, penetrasi pasar, integrasi ke belakang, integrasi ke depan, maupun diversifikasi terkait.

Berdasarkan hasil matriks SWOT diperoleh empat alternatif strategi yaitu (strategi I) meningkatkan kualitas produk dalam mempertahankan loyalitas pelanggan dan memperoleh pelanggan baru, (strategi II) menambah kerja sama dengan perantara pemasaran dan memanfaatkan peluang pasar serta tren *back to nature* guna memperluas jaringan pasar dan distribusi produk, (strategi III) meningkatkan kegiatan promosi *online* dan *offline* dengan memberi pelatihan kepada karyawan dan memanfaatkan dukungan dari pemerintah, dan (strategi IV) menambah varian produk untuk menjangkau konsumen di berbagai kalangan. Beberapa alternatif tersebut selanjutnya dinilai berdasarkan daya tariknya, yakni yang tertinggi adalah strategi meningkatkan kualitas produk dalam rangka mempertahankan loyalitas pelanggan dan memperoleh pelanggan baru. Strategi tersebut dapat menjadi prioritas bagi CV. Pantiboga Natural Food Specialist.

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Research Article

Marketing of Hybrid Corn in Tapenpah Village, Insana District, North Central Timor Regency during the New Habit Adaptation Period

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ABSTRACT

The goal of this study was to determine the general definition of the marketing channel, to know the marketing roles, the marketing margins, and to use a marketing analysis to determine the price earned by hybrid corn traders. The sampling scheme was carried out by purposive sampling on hybrid corn dealers, the number of samples taken by as many as 26 respondents. The data collection tool was used to perform interviews with respondents using questionnaires. The methodological method used was the study of the marketing margin. The findings showed that the margin at the retailer level was IDR 500/kg (0.11 percent) while the retailer margin was IDR 1500/kg (0.11 percent) (0.25 percent). This means that the difference between the purchasing price and the sale price of the collector is less than the difference between the purchase price and the retail price. Since there are two elements in the marketing margin, namely the expense component and the benefit component. Thus, the price component is IDR 4.500/kg (0.11 percent) and IDR 6.000/kg (0.25 percent) for retailers. This indicates that the market prices by the collectors are higher than the retailers

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INTRODUCTION

The contribution of the agricultural sector to Gross Domestic Product (GDP) in the second quarter of 2020 was 15.46%. That amount increased due to the contribution in the second quarter of 2019, which was 13.57%. Apart from agriculture, other sectors that contribute significantly to GDP are industry, trade, construction, and mining. The Central Bureau of Statistics (BPS, Badan Pusat Statistik) also recorded that the number of people working in Indonesia in November 2020 was 128.45 million people. Based on employment in the agricultural sector, 38.23 million labor, or 29.76% of the total employed population. In 2015, the GDP of the agricultural sector based on constant prices was IDR 790.12 trillion. In 2016 it increased to IDR 813.58 trillion. The increase occurred again in 2017 to IDR 840.88 trillion and in 2019 reached IDR 906 trillion. As of the 3rd quarter of 2020, till IDR 791.76 trillion growth is still positive even though it is affected by the global COVID-19 pandemic (BPS, 2020). Soehardjo (2010) states that the role of the agricultural sector in Indonesia is very important in contributing a significant development of economic growth and the welfare of farmers, as a

source of income for basic necessities, clothing, and shelter, providing employment, contributing the high national income, and providing the country with foreign exchange.

The weaknesses in the agricultural development system for developing countries are a lack of planning, purchasing, selling, transportation, storage, standardization and grouping, financing, communication, and *risk-bearing* which are not going well as expected (Soekartawi, 2011). Marketing of agricultural commodities is a process of concentration of agricultural products by farmers to consumers, which passes through several intermediaries such as directly to consumers, salesmen, collectors, and wholesalers. According to Sudiyono (2002), the marketing process will end in the distribution process, namely the sale of merchants' products to agents, retailers, and consumers and in principle, it is closely related to income levels to increase farmer productivity.

Corn is the second important food crop after rice, considering its multipurpose function as food, nutrition, and energy source (Amzeri, 2018; Watson, 2015), and is the second-largest food contributor to Gross Regional Domestic Product (GRDP) after rice. In Indonesia, corn is the second-largest source of carbohydrates after rice. The chemical content of corn consists of 13.5% water, 10% protein, 4% fat, 61.0% carbohydrates, 1.4% sugar, 6.0% pentose, 2.3% crude fiber, 1.4% ash, and 0.4% other chemical substances. By observing the chemical content and composition, besides being a source of calories, corn also supplies nutrients to obtain a nutritional balance for the population. According to the Central Bureau of Statistics data, the national corn production in 2014 was 19.0 million tons. Growth in corn production increased in 2015 to 19.6 million tons, the increase in corn production continued in 2016 to 23.6 million tons. Then in 2017, corn production reached 28.9 million tons. Corn production in Indonesia in 2018 increased again to 30 million tons.

In some areas of East Nusa Tenggara, corn is still used as a staple food, especially local varieties are still maintained (Manikin, M. G., & Joka, 2020). For example in Kupang Regency, South Central Timor Regency (SCT), North Central Timor Regency (NCT), Sumba Island, Flores Island, Belu Regency, Malacca Regency, corn is not only a source of food but also corn farming is a source of income and employment as one of the commodities that can affect the country's foreign exchange in world trade. In the future, there are strong indications that the development of corn production will continue to grow, along with increasing population and increasing awareness of community nutrition, so that hybrid corn varieties have a good potential for development because they have the advantage of being disease resistant, tolerant of high temperatures and drought (Azrai, 2015). Observing that the production and development of corn farming in East Nusa Tenggara province continue to increase, the Governor of East Nusa Tenggara issued a program to continue to increase corn production. Planting Cattle Harvest Corn is a program of the Governor of East Nusa Tenggara which is also synergized with the National Food Estate program to realize food security during a pandemic (Sutawi, 2020), which integrates food crop farming with livestock on dry land (Palobo, 2019), and hybrid corn is a commodity suitable for the climate in East Nusa Tenggara Province which is semi-framed.

In 2017, corn production amounted to 809,803 dry shelled tons from the harvested area of 313,150 hectares (*ha*) with an average production per hectare of 25.86 centners. Compared to 2016, corn production increased by 17.63 percent, and harvested area increased by 18.03 percent. This increase in corn production was due to an increase in harvested area by 18.03 percent, although productivity decreased by 0.33 percent. Over the last 10 years, corn production in East Nusa Tenggara fluctuated with an average growth of 5.74 percent per year.

The North Central Timor Regency has a long history of growing corn (since 1982). According to data from the Agriculture Service Office of North Central Timor (2019), the 2015 production target: 7000 tons; 2016: 10,500 tons; and 2017: 5,425 tons. Nevertheless, the results obtained in 2015: 1,033.2 tons; 2016: 1,236.7 tons; and 2017: 1,490 tons, where productivity achieved an average of 2.37 tons/*ha*. Corn production in 2018 reached 72,145 tons or an increase of 39.04 percent from corn production in 2017.

Insana as one of the sub-districts in North Central Timor is the center of corn production reached 16.452 tons in a land area of 7864 *ha* so that the productivity obtained was 2.09 tons/*ha*. The corn production has been marketed by farmers both in the local market and between neighboring districts (Belu and Malacca Regencies). To market corn, there are a number of market players who connect farmers and consumers to form a marketing flow.

Corn marketers certainly understand the nature of the corn they sell in terms of both quality and quantity. Good product quality must be supported by a good marketing strategy so that consumers know that the products offered are suitable for consumption (Gojali, 2020; Roidah, 2013; Saranani & Hasniati, 2020). One of

the problems is that the role of agribusiness institutions has not been maximized, especially in the marketing of agricultural products (Sarasutha, 2000; Sinaini&lwe, 2020), which has an impact on the small percentage of prices received by farmers and the prices paid by consumers. One of the factors behind this problem is the weak position of farmers in the market. This is very detrimental to both farmers and consumers. Low prices at the farmer level will cause farmers to decrease their interest in increasing their production and high prices, at the consumer level will cause consumers to reduce consumption.

The impact of the COVID-19 pandemic on the agricultural sector, especially the food crop sector in Indonesia, has changed. This can lead to changes in prices for food products. COVID-19 has also affected various sectors of human life, including agriculture. Distribution disruption occurred due to Indonesia's large-scale social restrictions, causing a decrease in people's purchasing power, even though it was affected, the agricultural sector could be a solution to the crisis that occurred (BAPPENAS, 2009). The COVID-19 pandemic is an opportunity for Indonesian farmers to increase their income according to people who are more fond of local products because they are fresher and safer. The COVID-19 pandemic has also disrupted marketing activities, so that agricultural products, especially food crops, cannot be marketed ordinarily (MohAfrizalMiradji et al., 2020). Corn marketing during the COVID-19 pandemic can also be hampered because all markets, as well as large-scale marketing activities, cannot be carried out, including export activities (Maulana&Nubatonis, 2020).

Corn farmers, as producers, are not only concerned with the marketing system but also need to pay attention to the flow of marketing. The aim is to reduce marketing costs covering multiple marketing chains with different market participants and service costs. The amount of profit for each participant depends on the market structure at each level, the bargaining position, and the efficiency of each participant (Martines-filho et al., 2000). This is to help farmers to get a better price, especially during the adaptation period for new habits (*new normals*) where the implementation of health protocols in activities can affect the marketing of corn commodities.

RESEARCH METHOD

This research was conducted from July to August 2020 at the Bilubahan Farmers Group in the Tapenpah Village, Insana District, as one of the farmer groups cultivating and marketing hybrid corn at the corn production center of North Central Timor Regency. The research on the Analysis of Hybrid Corn Marketing by farmers in Tapenpah Village, Insana District, North Central Timor Regency, discusses the marketing channels for hybrid corn producers, collectors, retailers to the final consumer. Which is stated in the sale and the purchase price. Also, the marketing functions of hybrid corn, the difference in the marketing margin for hybrid corn in Tapenpah Village, Insana District, North Central Timor Regency. Marketing margin is used to see the difference between the price paid by retailers and the price received by the collecting traders carried out by the marketing channel.

In order to know the marketing channels, marketing functions, and to find out the corn marketing margin in Bilubahan Farmers Group in the Tapenpah Village, Insana District, North Central Timor Regency, the data were analyzed using marketing margin analysis, which is the result of measuring the difference between the sales and the purchase price. Marketing margin can be expressed as the sum of marketing costs and profits obtained by the merchants involved (Hanaffiah and Saefudin, 1989). The marketing margin formula is as follows (Anggipora, 2002):

$$MP = PK - PP$$

Information :

MP: Marketing Margin (IDR / Kg)

Pk: Prices at the Consumer Level (IDR / Kg)

Pp: Price at Trader Level (IDR / Kg)

Cp: Marketing Costs (IDR / Kg)

π: Marketing Agency Profits (IDR / Kg)..

RESULTS AND DISCUSSION

Corn Marketing Channels in Tapenpah Village, Insan District, North Central Timor Regency

Corn marketing channels are marketing patterns that are formed during the movement of agricultural commodities from farmer producers to final consumers (Azria, 2017; Saranani&Hasniati, 2020). The marketing channels formed during the distribution of corn from production to the final consumer are shown in Figure 1.

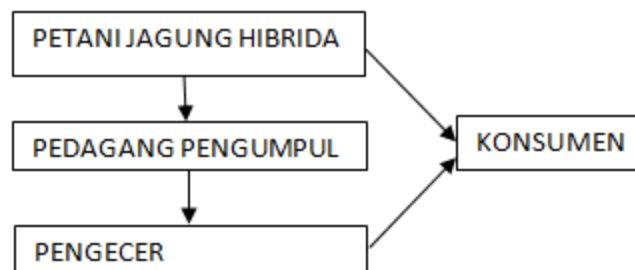


Figure 1. Corn Marketing Channels in Tapenpah Village, Insan District, North Central Timor Regency

Figure (1) shows that the channel formed into 3 types is similar to the research of Yusuf et al., (2020) and Dewi et al., (2018), namely:

1. Hybrid corn growers - consumers

The marketing conditions for hybrid corn in this channel are hybrid corn farmers selling directly to consumers where the sale is directly at the place of the buyer or marketplace. Of the 24 respondents, 14 respondents directly sell to consumers. However, not all of the products are sold directly to consumers, but some can be sold to collector traders who pick up or buy directly from the seller so that corn farmers do not need to go to the market.

2. Hybrid corn farmers - traders

The marketing conditions for hybrid corn in this channel are: hybrid corn farmers directly sell their produce to collectors who buy from the seller's shop. Where the collecting traders buy at IDR 4,000 per kg. Meanwhile, if the farmers sell directly to the market/consumers, the price is IDR 5,000 per kg. The corn farmers know that selling to collectors causes them to lose IDR 1,000 compared to selling directly to consumers. This is due to the needs of the family so that farmers can sell their products without having to sell them to markets, which is similar to the study by Hadjah, (2009) regarding the marketing of corn in West Nusa Tenggara Province.

3. Collector traders - Retailers

The marketing conditions for hybrid corn in this channel are: the yields obtained from hybrid corn farmers range from 500 kg to 1 ton. The collector traders can sell again to retailers, in this case, to the Agricultural Micro Shop. Where the collector traders buy from farmers at a price of IDR 4,000 and are forwarded to retailers for IDR 4500.

4. Retailers - end consumers

The marketing conditions for hybrid corn in this marketing channel are: the proceeds that can be purchased from collectors can be resold to the final consumer at a price of IDR 5000 per kg.

Functions of Hybrid Corn Marketing in the Bilubahan Farmers Group

The functions performed by traders in marketing shallots to consumers and the market are as follows:

Table 1. Marketing functions performed by traders

NO	MARKETING FUNCTIONS	P-K	P-PP	PP-PP	PP-K
1	Exchange				
	1. Purchase		✓	✓	
	2. Sale	✓	✓	✓	✓
2	Physical Provision				
	1. Transportation	✓	✓	✓	
	2. Warehousing	✓	✓	✓	
	3. Processing				
3	Provision of Facilities				
	1. Standardization	✓			
	2. Expenditure		✓	✓	
	3. Suspension of risk	✓	✓	✓	
	4. Market information	✓	✓	✓	

Source: Processed primary data (2020)

Information:

P-K: Hybrid corn seller from producers to consumers

P-PP: Hybrid corn seller from producers to collectors

PP-PP: Hybrid corn seller from collectors to retailers

PP-K: Hybrid corn seller from retailers to consumers

Table 2. Price of hybrid corn at the trader level

Institutional level	Hybrid Corn	
	Purchase price / kg (IDR)	Selling price / kg (IDR)
Farmer		5.000
Collector	4.000	4.500
Retailer Trader	4.500	6.000

Source: Processed primary data (2020)

Marketing margin

The marketing margin for hybrid corn is the difference between the price paid by consumers and the price received by producers (Dewi et al., 2018; Sujarwo et al., 2011). Marketing margin consists of two components, namely the marketing cost component and the cost-profit component (Devitra, et al., 2018; Indrianti, 2020). Based on the varied marketing channels for hybrid corn in T apenpah Village, the marketing margins also vary. The marketing margin in each marketing channel is as follows:

Table 3. Distribution of the marketing margin for hybrid corn among traders in T apenpah Village

Description	Price IDR / Kg	Distribution				Percentage (%)
		Sales and purchase volumes	Total sales and purchases	Profit	Margi n (IDR)	
Selling price	4.500	3.600	16.200.000		500	0,11
Purchase price	4.000	3.600	14.400.000			
		0				
Marketing cost						
1. Transportation	200.000					0,09
2. Labor	160.000					0,14
3. Packing	54.000					0,02
4. Others	100.000					0,04
Total cost	514.000					0,22
Total				1.260.000		0,78

Source: Processed primary data (2020)

Table (3) shows that the margin at the collector trader level is IDR 500 with a percentage of 0.11%. This research is supported by the results of Widiastuti&Harisudin (2012); Sujarwo et al., (2011); Virgiana et al., (2019) stated that the marketing margin is spread unevenly, namely between 62.50% - 71.07% with farmer's share between 28.93% - 37.50%. The most efficient channel is the farmer - PPK - PMT, because it has the lowest marketing margin (IDR 1,655 or 62.50%) with the largest farmer's share (37.50%).

Table 4. Distribution of the marketing margin of hybrid corn in T apenpah Village among retailers

Description	Price IDR/Kg	Distribution				
		Sales and purchase volumes	Total sales and purchases	Profit	Margin (IDR)	Percentage (%)
Selling price	6.000	3.600	21.600.000		1.500	0,25
Purchase price	4.500	3.600	16.200.000			
Marketing costs						
1. Labor						
2. Packing	60.000					0.01
Total cost						
Total				5.400.000		1.01

Source: Processed primary data (2020)

Table (4) shows that the margin at the retailer level is IDR 1,500 with a percentage of 0.25%, according to the findings of Cristo et al., (2009); Maasi&Pombode (2019); and Saranani&Hasniati, (2020).

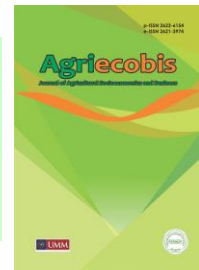
CONCLUSION

The marketing conditions for hybrid corn implemented by the Bilubahan Farmer Group during the adaptation period are as follows: hybrid corn farmers sell directly to consumers where the sale is at the buyer's place or the market. Hybrid corn farmers then sell their produce directly to collectors who buy them directly at the seller's place for IDR 4,000 per kg. Meanwhile, if the farmers sell corn directly to the market/consumer, it is IDR 5,000 per kg and the collectors will sell it to retailers. Collecting traders buy from farmers for IDR 4,000 and are forwarded to retailers for IDR 4,500. Then the proceeds that can be purchased from collectors can be sold again to the final consumer for IDR 6,000 per kg. The margin at the collector merchant level is IDR 500 with a percentage of 0.11%, while the margin at the retailer level is IDR 1,500 with a percentage of 0.25%.

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Artikel Penelitian

Analisis Pemasaran Biji Kopi Robusta di Desa Jambuwer Kecamatan Kromengan Kabupaten Malang

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ABSTRACT

Indonesia is recorded as the third largest coffee producing country in the world. Robusta coffee is widely cultivated in Jambuwer Village Malang Regency. The purpose of this study was to determine: Robusta coffee marketing channels in Malang Regency. Calculating the amount of marketing margin, margin distribution and *share* of robusta coffee in Malang Regency. The results of this study indicate that there are four patterns of robusta coffee marketing channels, namely, marketing channel I: Farmers - Wholesalers - Retailers - Consumers. Marketing channel II: Farmers - Middlemen - Resellers - Consumers. Marketing channel III: Farmers - Middlemen - Consumers and marketing channels IV: Farmers - Middlemen - Companies. Meanwhile, the marketing margin for channel I is Rp. 4,000, marketing margin for channel II is Rp. 95,000, channel marketing margin is Rp. 95,000 and channel marketing margin is Rp. 2,000. The farmer's share value in marketing channel I was 84%, marketing channel II was 24%, marketing channel III was 24% and marketing channel IV was 91.7%. The result of the most efficient marketing channel for farmers is the marketing channel IV because it has a low marketing margin and a high farmer share value.

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PENDAHULUAN

Sektor pertanian memiliki peran penting dalam perekonomian Indonesia. Peran sektor pertanian..tersebut dapat dilihat dari besarnya kontribusi Produk Domestik Bruto (PDB) sektor pertanian terhadap PDB nasional. Sektor pertanian juga memiliki peran penting sebagai penyedia bahan baku produksi bagi sektor industri dan juga sebagai penyedia lapangan kerja masyarakat. Pertanian di Indonesi terbagi menjadi beberapa subsektor yaitu: pangan, perkebunan, perikanan dan peternakan. Subsektor perkebunan merupakan penghasil devisa terbesar selain minyak dan gas bumi (Soetrisno, 2002).

Salah satu tanaman perkebunan yang penting di Indonesia adalah kopi. Ada empat jenis tanaman kopi yang dibudidayakan di Indonesia, yaitu Kopi Robusta, Arabika, Liberika, dan Ekselsa. Jenis tanaman kopi yang banyak diperdagangkan di Indonesia dan memiliki nilai ekonomi yang cukup tinggi yaitu Robusta dan Arabika (Rahardjo, 2013). Kualitas dari citra rasa Kopi Arabika lebih baik dari Robusta, namun budidaya tanaman kopi Arabika lebih rentan terkena penyakit tanaman. Oleh karena itu, luas areal pertanaman kopi dan produksi kopi terbesar di Indonesia adalah Kopi Robusta (Sari, 2019).

Pemasaran merupakan aspek yang sangat penting dalam sistem agribisnis. Jika mekanisme pemasaran berjalan baik, maka semua pihak yang terlibat akan diuntungkan. (Khaswarina et al., 2019) menyatakan bahwa proses pemasaran perlu melibatkan lembaga pemasaran, oleh karena itu peran lembaga pemasaran menjadi sangat penting (Putri et al., 2018). Pemasaran juga memiliki peran penting dalam usaha pertanian. Aktivitas pemasaran merupakan tindakan ekonomi yang berpengaruh terhadap harga pasar. Tingginya produksi tidak mutlak memberikan keuntungan yang tinggi tanpa pemasaran yang baik dan efisien (Wowiling et al., 2019). Pemasaran Kopi Robusta memerlukan upaya efisiensi dan efektifitas pada saluran pemasaran, dengan tujuan untuk meningkatkan keuntungan (Pratiwi et al., 2019).

Hasil penelitian terdahulu terkait pemasaran biji kopi telah dilaksanakan oleh Caesara et al. (2017); Desiana et al. (2017); Maharani & Furyanah (2020); Murtiningrum & Gabrienda (2019); Pratiwi et al. (2019). Kebaharuan dari penelitian pada kondisi Pandemi Covid-19, sehingga menarik untuk dikaji terkait kondisi pemasaran beserta distribusinya dengan berbagai permasalahan yang dihadapi seperti faktor perekonomian, kendala distribusi dan kesehatan. Selain kondisi Pandemi Covid-19, penelitian ini juga menyajikan metode indeks efisiensi saluran pemasaran sebagai ukuran efisiensi pemasaran biji kopi di Desa Jambuwer Kecamatan Kromengan Kabupaten Malang.

Desa Jambuwer merupakan salah satu penghasil Kopi Robusta di Kabupaten Malang. Ketinggian tempatnya rata-rata berada 433 meter dari permukaan laut, suhu udara berada pada kisaran 25-35°C, sehingga sangat cocok sebagai lahan perkebunan Kopi Robusta. Petani Desa Jambuwer biasa menjual kopi dalam bentuk *cerry* (biji merah matang) dan *greenbean* (biji hijau) yang dijual melalui lembaga pemasaran hingga sampai konsumen. Lembaga Pemasaran yang berperan meliputi tengkulak, pedagang besar, pedagang pengecer, dan *reseller*. Adanya berbagai lembaga pemasaran serta saluran pemasaran yang berbeda menyebabkan perbedaan harga jual dan keuntungan yang diterima petani kopi di Desa Jambuwer. Semakin panjang rantai pemasaran maka semakin semakin besar margin harga. Penelitian ini bertujuan untuk menganalisis saluran pemasaran Kopi Robusta dari Desa Jambuwer, dan menganalisis efisiensi pada setiap saluran pemasaran.

METODE

Penelitian ini menggunakan metode analisis deskriptif kuantitatif. Lokasi penelitian ditentukan secara *purposive* (sengaja) yaitu di Desa Jambuwer Kecamatan Kromengan Kabupaten Malang. Sampel penelitian sebanyak 34 petani dari total 148 petani kopi di Desa Jambuwer. Jumlah tersebut didapatkan menggunakan rumus Slovin. Pemilihan sampel petani menggunakan metode simple random sampling, sedangkan pemilihan sampel lembaga pemasaran biji kopi menggunakan metode *snow ball sampling*. Jumlah sampel lembaga pemasaran Kopi Robusta di Desa Jambuwer berjumlah 8 orang. Mereka terdiri dari tengkulak, pengecer, reseller dan perusahaan. Jenis data yang digunakan adalah data primer yang diperoleh melalui wawancara terstruktur dengan petani dan pedagang. Wawancara dilakukan menggunakan bantuan daftar pertanyaan (kuesioner) yang telah disiapkan. Observasi dilakukan untuk mengamati fenomena pemasaran kopi yang ada di lokasi penelitian, untuk melengkapi informasi yang tidak tercantum dalam daftar pertanyaan.

1. Margin Pemasaran

Margin pemasaran adalah selisih harga yang harus dibayarkan oleh konsumen akhir dengan harga jual produk dari produsen/petani (Hidayat et al., 2017). Margin pemasaran dihitung dalam satuan Rupiah per Kilogram. Dua komponen utama dari margin pemasaran adalah biaya pemasaran dan keuntungan pemasaran (Kai et al., 2016). Analisis nilai dari margin pemasaran juga dapat digunakan untuk mengetahui bagian (*share*) yang akan diterima oleh petani (Sofanudin & Budiman, 2017).

Rumus margin pemasaran sebagai berikut :

$$MP = Pr - Pf$$

Keterangan:

M = Margin pemasaran

Pr = Harga kopi di tingkat.konsumen (Rp/Kg)

Pf = Harga kopi di tingkat.produksen (Rp/Kg)

2. Distribusi Margin

Distribusi margin merupakan pembagian komponen biaya dan keuntungan yang terjadi pada masing-masing lembaga pemasaran terlibat dalam setiap saluran pemasaran

Rumus distribusi margin sebagai berikut :

$$\text{Distribusi Margin} = \frac{\text{Komponen Biaya dan Keuntungan}}{\text{Margin Pemasaran (MP)}} \times 100\% \quad (1)$$

3. *Farmer's Share*

Farmer's Share adalah pembagian harga yang diterima petani, yang diperoleh dengan cara membandingkan harga dari tingkat petani dan harga pada tingkat konsumen yang dinyatakan dalam bentuk persentase (Desiana et al., 2017). Semakin tinggi *Farmer's share* berarti semakin tinggi bagian harga yang diterima petani (Jakiyah & Sukmaya, 2020).

Rumus *Farmer's share* sebagai berikut:

$$F_s = \frac{P_f}{P_r} \times 100\% \quad (2)$$

Keterangan:

F_s = *Farmer's share*

P_f = Harga kopi di tingkat petani (Rp/Kg)

P_r = Harga kopi di tingkat pengecer (konsumen akhir) (Rp/Kg)

4. Efisiensi Saluran Pemasaran

Efisiensi pemasaran merupakan salah satu ukuran (indikator) pemasaran yang baik. Kegiatan pemasaran bertujuan untuk mendapatkan keuntungan yang maksimum dan tingkat efisiensi yang tinggi. Sistem pemasaran yang tidak efisien akan mengakibatkan kecilnya bagian dari harga yang diterima oleh produsen (Arafah et al., 2017).

$$EP = \frac{\text{Biaya Pemasaran}}{\text{Nilai produk yang dipasarkan}} \times 100 \quad (3)$$

HASIL DAN PEMBAHASAN

Saluran pemasaran merupakan bagian dari keseluruhan jaringan penghantar nilai pelanggan. Produsen harus menyeimbangkan kebutuhan konsumen tidak hanya terhadap kelayakan dan biaya untuk memenuhi kebutuhan tetapi juga terhadap preferensi harga pelanggan (Maharani & Furyanah, 2020). Hasil penelitian yang telah dilakukan di Desa Jambuwer, Kecamatan Kromengan, Kabupaten Malang menunjukkan ada 4 pola saluran pemasaran.

Saluran Pemasaran I: Petani > Tengkulak > Pengecer > Konsumen

Saluran Pemasaran II: Petani > Tengkulak > Reseller > Konsumen

Saluran Pemasaran III: Petani > Tengkulak > Konsumen

Saluran Pemasaran IV: Petani > Tengkulak > Perusahaan

Saluran pemasaran Kopi Robusta Desa Jambuwer terdiri dari beragam lembaga pemasaran mulai dari tengkulak, reseller, dan pengecer. Pelaku pemasaran kopi didominasi oleh tengkulak. Fenomena ini sama dengan temuan penelitian terdahulu tentang jaringan rantai pasok pemasaran kopi di Kabupaten Pasuruan yang cukup banyak agen pemasaran yang didominasi oleh tengkulak pada setiap saluran pemasaran (Aklimawati, 2018).

Setiap saluran pemasaran kopi Robusta di Desa Jambuwer memiliki segmentasi pasar yang berbeda-beda mulai dari konsumen masyarakat secara umum di pasar, cafe dan perusahaan pengeksport kopi. Adanya segmentasi pasar yang berbeda menyebabkan perbedaan perlakuan dan kualitas kopi yang dipasarkan oleh setiap lembaga pemasaran. Konsekuensinya adalah terjadi perbedaan harga yang signifikan pada beberapa lembaga pemasaran. Saluran pemasaran I memasarkan kopi pada konsumen akhir masyarakat umum. Kualitas kopi pada saluran I cenderung memiliki standar mutu rendah dan minimnya proses sortasi. Akibatnya adalah nilai jual kopi cenderung lebih rendah dibandingkan saluran pemasaran lainnya.

Sedangkan biji kopi yang dijual pada saluran pemasaran II dan III dengan segmentasi pasar Cafe memiliki kualitas kopi yang tinggi atau dikatakan sebagai kopi premium. Proses pemasaran kopi pada saluran ini melalui banyak perlakuan dan seleksi. Pemilihan biji kopi yang bagus dimulai dari seleksi biji kopi petik merah (*cherry*). Selanjutnya adalah proses perambangan, bertujuan untuk memisahkan kopi yang rusak dan yang bagus. Proses penyortiran kopi juga dilakukan berdasarkan ukuran. Berbagai perlakuan tersebut menyebabkan harga biji kopi pada saluran pemasaran II dan III lebih tinggi dibandingkan saluran pemasaran lainnya.

Biji kopi pada saluran pemasaran IV memiliki kualitas dan standar yang lebih tinggi dibandingkan dengan saluran pemasaran I. Prosesnya memiliki standar yang ditentukan oleh tengkulak, yaitu biji kopi yang dijual harus memiliki fisik luar yang baik dan juga dilakukan proses sortasi sebelum dipasarkan pada perusahaan. Harga jual biji kopi pada saluran pemasaran IV lebih tinggi dibandingkan saluran pemasaran I. Temuan ini sejalan dengan (Andriadi et al., 2019) yang menyatakan bahwa di Kabupaten Aceh Tengah terdapat sistem pemasaran produk kopi yang dilakukan melalui dua cara yaitu melalui penjualan ekspor dan penjualan domestik. Ada perbedaan pendapatan petani kopi dalam untuk tujuan pemasaran yang berbeda (luar negeri

atau dalam negeri). Petani mendapatkan keuntungan lebih pada tujuan pasar ekspor. Meskipun perbedaan kategori pasarnya tidak sama, namun esensinya adalah tujuan pemasaran yang lebih tinggi segmen pasarnya memperoleh keuntungan yang lebih tinggi. Hal ini juga sejalan dengan hasil penelitian (Higuchi et al., 2012) yang menunjukkan bahwa terdapat variasi harga kopi yang cukup besar pada berbagai saluran pemasaran.

Saluran Pemasaran I

Pada saluran pemasaran I, petani melakukan pemanenan kopi kemudian melakukan proses penjemuran kurang lebih 2 minggu kemudian petani melakukan proses pengupasan dari kulit luar kopi sebelum dijual langsung ke tengkulak dalam bentuk *green been*, tengkulak langsung mendatangi petani untuk membeli kopi secara tunai, yang kemudian kopi diangkut oleh Tengkulak tersebut sebelum disalurkan ke Pasar Panjen. Tengkulak melakukan pengiriman kopi ke pasar Panjen dengan menggunakan mobil pick-up. Setelah tengkulak sampai di pasar, kopi kemudian dijual ke pedagang-pedangan pengecer yang sebagian besar sudah menjadi langganan dari tengkulak. Pengecer selanjutnya menjual kopi ke konsumen dengan harga lebih tinggi. Pada saluran pemasaran I ini menggunakan 2 lembaga pemasaran dan merupakan saluran pemasaran yang terpanjang

Saluran Pemasaran II

Pada saluran pemasaran II, petani melakukan pemanenan kopi dan melakukan sortasi dengan pemisahan antara kopi yg merah dan hijau. kemudian petani membawa hasil panen menggunakan motor dan pick up ketengkulak dan menjual kopi dalam bentuk basah (*cherry*). Tengkulak melakukan proses pengupasan dan penjemuran yang dilakukan kurang lebih 2 minggu. Setelah kering tengkulak melakukan proses pengupasan dan sortasi antara biji kopi yang bagus dan yang rusak. Setelah disortasi tengkulak melakukan roasting dan melakukan pengemasan kopi. Kopi yang sudah berbentuk *rose been* kemudian dikemas dan dikirim kereseller menggunakan motor. Reseller menjual kopi kekonsumen melalui sosial media dengan harga yang lebih tinggi. Pada saluran pemasaran II ini menggunakan 2 lembaga pemasaran.

Saluran Pemasaran III

Pada saluran pemasaran III, petani melakukan pemanenan kopi dan melakukan sortasi dengan pemisahan antara kopi yg merah dan hijau. kemudian petani membawa hasil panen menggunakan motor dan pick up ketengkulak dan menjual kopi dalam bentuk basah (*cherry*). Tengkulak melakukan proses pengupasan dan penjemuran yang dilakukan kurang lebih 2 minggu. Setelah kering tengkulak melakukan proses pengupasan dan sortasi antara biji kopi yang bagus dan yang rusak. Setelah disortasi tengkulak melakukan roasting dan melakukan pengemasan kopi. Kopi yang sudah berbentuk *rose been* kemudian dikemas dan langsung dipasarkan menggunakan sosial media serta dikirim ke cafe-cafe yg sudah menjadi pelanggan tetap dari tengkulak. Pada saluran pemasaran III ini menggunakan 1 lembaga pemasaran dan merupakan saluran pemasaran yang terpendek.

Saluran Pemasaran IV

Pada saluran pemasaran IV, petani melakukan pemanenan kopi kemudian melakukan proses penjemuran kurang lebih 2 minggu kemudian petani melakukan proses pengupasan dari kulit luar kopi sebelum dijual langsung ke tengkulak dalam bentuk *green been*, tengkulak langsung mendatangi petani untuk membeli kopi secara tunai, yang kemudian kopi diangkut oleh Tengkulak tersebut sebelum disalurkan ke PT. Asal Jaya yang ada di Dampit. Tengkulak melakukan pengiriman kopi ke perusahaan dengan menggunakan mobil pick-up. Pada saluran pemasaran IV ini menggunakan 1 lembaga pemasaran.

Analisis Margin Pemasaran, Share dan Distribusi Margin Pada Saluran Pemasaran Kopi Robusta di Desa Jambuwer Kab. Malang

Dua komponen utama dari Margin pemasaran adalah biaya pemasaran dan keuntungan pemasaran. Biaya pemasaran sendiri merupakan biaya yang harus dikeluarkan dalam terjadinya proses pemasaran seperti sortasi, pengangkutan, pengemasan, bongkar muat, penyusutan, dan penyimpanan. Kecil dan besarnya margin pada suatu saluran pemasaran dapat disebabkan dari besar kecilnya volume penjualan, jarak lokasi pemasaran dari produsen hingga konsumen akhir, fungsi fungsi pemasaran pada lembaga pemasaran, serta panjang pendeknya saluran pemasaran yang ada. (Situmorang et al., 2015) Margin pada setiap tingkat lembaga pemasaran dapat dihitung dengan jalan menghitung selisih antara harga jual dengan harga beli pada setiap tingkat lembaga pemasaran (Septiyani et al., 2017).

Analisis Margin Pemasaran, Share dan Distribusi Margin Pada Saluran Pemasaran I

Tabel 1 menunjukkan bahwa saluran pemasaran satu adalah saluran pemasaran kopi yang melalui dua rantai pemasaran yaitu tengkulak dan pengecer. rata-rata harga jual kopi dalam bentuk *green been* di tingkat petani sebesar Rp 21.000/kg. Tengkulak A menjual kopi ke pengecer dengan harga rata-rata yaitu Rp 22.500/kg. Di sini tengkulak mendapatkan margin pemasaran sebesar Rp 1.500/kg dan melakukan fungsi pemasaran seperti bongkar muat Rp 200/kg, dan transportasi untuk menggunakan pick up Rp 80/kg sehingga

keuntungan yang diambil tengkulak sebesar Rp 1220/kg. Sedangkan Pengecer menetapkan rata-rata harga jual kopi Rp 25.000/kg dan memperoleh margin pemasaran sebesar Rp 2.500/kg dan pengecer mendapatkan keuntungan sebesar Rp 2500/kg.

Tabel 1. Analisis Margin Pemasaran, Share dan. Distribusi Margin Pada Saluran Pemasaran I

Lembaga Pemasaran	Nilai (Rp/Kg)	Margin Pemasaran (Rp/Kg)	Distribusi Margin (%)	Share (%)
1. Petani				
a) Biaya-Biaya				
Pemanenan	900		22,5	3,6
Pengupasan	500		12,5	2
Penjemuran	100		2,5	0,4
Transportasi	50		1,25	0,2
Harga Jual (Pf)	21.000			84
2. Tengkulak		1.500		
a. Harga Beli	21.000			
b. Biaya-Biaya				
Bongkar muat	200		5	0,8
Transportasi	80		2	0,32
c. Total Biaya	280		7	1,12
b. Harga Jual	22.500			90
d. Keuntungan	1.220		30,5	4,88
3. Pengecer		2.500		
a. Harga Beli	22.500			
b. Harga Jual	25.000			
c. Keuntungan	2.500		62,5	10

Analisis margin pemasaran menunjukkan Biaya pemasaran kopi terdiri dari biaya pemanenan, pengupasan, penjemuran, bongkar muat, dan transportasi. Pada saluran pemasaran I terdiri dari dua lembaga pemasaran yaitu tengkulak A dan pengecer. Margin pemasaran ($Pr - Pf$) dari saluran pemasaran I sebesar Rp 4.000/kg yang diperoleh dari harga jual kopi di pengecer (Pr) sebesar Rp. 25.000 dikurangi dengan harga jual kopi di petani (Pf) Rp 21.000. Nilai farmer's share pada saluran pemasaran I 84 %.

Analisis Margin Pemasaran, Share dan Distribusi Margin Pada Saluran Pemasaran II

Tabel 2. Analisis Margin Pemasaran, Share dan. Distribusi Margin Pada Saluran Pemasaran II

Lembaga Pemasaran	Nilai (Rp/Kg)	Margin Pemasaran (Rp/Kg)	Distribusi Margin (%)	Share (%)
1. Petani				
a) Biaya-Biaya				
Pemanenan	900		0,95	0,72
Harga Jual Basah (1 Kg)	6000			4,8
Harga Jual basah (5 Kg)	30.000			24
2. Tengkulak		70.000		
a. Harga Beli (5 Kg)	30.000			
b. Biaya-Biaya				
Sortasi	480		0,51	0,38
Pengupasan	500		0,53	0,4
Penjemuran	80		0,08	0,06
Roasting	20.000		21,05	16
Pengemasan	7.500		7,89	6
Transportasi	100		0,11	0,08
c. Total Biaya	28.660		30,17	22,93
b. Harga Jual	100.000			80
d. Keuntungan	41.340		43,51	33,07
3. Reseller		25.000		
a. Harga Beli	100.000			
d. Harga Jual	125.000			
c. Keuntungan	25.000		26,32	20

Tabel 2 menunjukkan bahwa saluran pemasaran satu adalah saluran pemasaran kopi yang melalui dua rantai pemasaran yaitu tengkulak dan pengecer. rata-rata harga jual kopi dalam bentuk greenbeen di tingkat petani sebesar Rp 21.000/kg. Tengkulak menjual kopi ke pengecer dengan harga rata-rata yaitu Rp 22.500/kg. Di sini tengkulak mendapatkan margin pemasaran sebesar Rp 1.500/kg dan melakukan fungsi pemasaran seperti, bongkar muat Rp 200/kg, dan transportasi untuk menggunakan pick up Rp 80/kg sehingga keuntungan yang diambil tengkulak sebesar Rp 1220/kg. Sedangkan Pengecer menetapkan rata-rata harga jual kopi Rp 25.000/kg dan memperoleh margin pemasaran sebesar Rp 2.500/kg dan pengecer mendapatkan keuntungan sebesar Rp 2500/kg.

Analisis margin pemasaran menunjukkan Biaya pemasaran kopi terdiri dari biaya pemanenan, pengupasan, penjemuran, bongkar muat, dan transportasi. Pada saluran pemasaran I terdiri dari dua lembaga pemasaran yaitu tengkulak dan pengecer. Margin pemasaran (Pr – Pf) dari saluran pemasaran I sebesar Rp 4.000/kg yang diperoleh dari harga jual kopi di pengecer (Pr) sebesar Rp. 25.000 dikurangi dengan harga jual kopi di petani (Pf) Rp 21.000. Nilai farmer's share pada saluran pemasaran II 24 %.

Analisis Margin Pemasaran, Share dan Distribusi Margin Pada Saluran Pemasaran III

Tabel 3. Analisis Margin Pemasaran, Share dan Distribusi Margin Pada Saluran Pemasaran III

Lembaga Pemasaran	Nilai (Rp/Kg)	Margin Pemasaran (Rp/Kg)	Distribusi Margin (%)	Share (%)
1. Petani				
a) Biaya-Biaya				
Pemanenan	900		0,95	0,72
Harga Jual Basah (1 Kg)	6000			4,8
Harga Jual basah (5 Kg)	30.000			24
2. Tengkulak		95.000		
a. Harga Beli (5 Kg)	30.000			
b. Biaya-Biaya				
Sortasi	480		0,51	0,38
Pengupasan	500		0,53	0,4
Penjemuran	80		0,08	0,06
Roasting	20.000		21,05	16
Pengemasan	7.500		7,89	6
Transportasi	100		0,11	0,08
c. Total Biaya	28.660		30,17	22,93
b. Harga Jual	125.000			
d. Keuntungan	66.340		69,83	53,07

Tabel 3 menunjukkan bahwa saluran pemasaran dua adalah saluran pemasaran kopi yang melalui dua rantai pemasaran yaitu tengkulak dan reseller. Pada saluran pemasaran ini petani menjual kopi dalam bentuk cherry dengan rata-rata harga jual sebesar Rp 6.000/kg. Tengkulak B membutuhkan 5 kg kopi dalam bentuk cherry untuk dijadikan 1 kg kopi dalam bentuk rose bean yang didapatkan dengan harga Rp. 30.000/5kg dan tengkulak menjual kopi dalam bentuk rose been dengan harga rata-rata yaitu Rp 100.000/kg. Di sini tengkulak mendapatkan margin pemasaran yang cukup besar yaitu Rp 70.000/kg karena tengkulak menjual kopinya dalam bentuk Rosebeen dan melakukan fungsi pemasaran seperti, sortasi Rp 480/kg, pengupasan Rp 500/kg, penjemuran Rp 80/kg, Roasting Rp 20.000/kg, pengemasan Rp 7.500/kg dan transportasi Rp 100/kg sedangkan keuntungan yang diambil tengkulak sebesar Rp 41.340/kg. Sedangkan Pengecer menetapkan rata-rata harga jual kopi Rp 125.000/kg dan memperoleh margin pemasaran sebesar Rp 25.000/kg dan pengecer mendapatkan keuntungan sebesar Rp 25.000/kg.

Analisis margin pemasaran menunjukkan Biaya pemasaran kopi terdiri dari biaya pemanenan, sortasi, pengupasan, penjemuran, roasting, pengemasan dan transportasi. Pada saluran pemasaran III terdiri dari dua lembaga pemasaran yaitu tengkulak dan Reseller. Margin pemasaran (Pr – Pf) dari saluran pemasaran II sebesar Rp 95.000/kg yang diperoleh dari harga jual kopi di Reseller (Pr) sebesar Rp. 125.000 dikurangi dengan harga jual kopi di petani 5 kg (Pf) Rp 30.000. Nilai farmer's share pada saluran pemasaran III 24%.

Analisis Margin Pemasaran, Share dan Distribusi Margin Pada Saluran Pemasaran IV

Tabel 4. Analisis Margin Pemasaran, Share dan . Distribusi Margin Pada Saluran Pemasaran IV

Lembaga Pemasaran	Nilai (Rp/Kg)	Margin Pemasaran (Rp/Kg)	Distribusi Margin (%)	Share (%)
1.Petani				
a)Biaya-Biaya Pemanenan	900	2000	45	3,75
Pengupasan	500		25	2,08
Penjemuran	100		5	0,42
Transportasi	50		2,5	0,21
Harga Jual (Pf)	22.000			91,7
2. Tengkulak C				
a.Harga Beli	22.000			
b.Biaya-Biaya				
Bongkar muat	100		10	0,84
Transportasi	166		8,3	0,69
c.Total Biaya	266		18,3	1,52
b. Harga Jual	24.000			
d. Keuntungan	1.644		82,2	6,85

Tabel 4 menunjukkan bahwa saluran pemasaran empat adalah saluran pemasaran kopi yang melalui satu rantai pemasaran yaitu tengkulak. Rata-rata harga jual kopi dalam bentuk greenbeen di tingkat petani sebesar Rp 22.000/kg. Tengkulak menjual kopi dengan harga rata-rata yaitu Rp 24.000/kg. Di sini tengkulak mendapatkan margin pemasaran sebesar Rp 2.000/kg dengan cara menjual kopi dalam bentuk greenbeen langsung ke konsumen industri. tengkulak melakukan fungsi pemasaran seperti, bongkar muat Rp 100/kg, dan transportasi Rp 166/kg dalam menggunakan kendaraan pick up untuk mengirim Kopi Robusta ke konsumen industri sedangkan keuntungan yang diambil tengkulak sebesar Rp 1644/kg.

Analisis margin pemasaran menunjukkan Biaya pemasaran kopi terdiri dari biaya pemanenan, pengupasan, penjemuran, bongkar muat, dan transportasi. Pada saluran pemasaran IV terdiri dari satu lembaga pemasaran yaitu tengkulak. Margin pemasaran (Pr – Pf) dari saluran pemasaran IV sebesar Rp 2.000/kg yang diperoleh dari harga jual kopi di tengkulak (Pr) sebesar Rp. 24.000 dikurangi dengan harga jual kopi di petani (Pf) Rp 22.000. Nilai farmer's share pada saluran pemasaran IV 91,7 %. Sehingga bila ditinjau dari nilai margin pemasaran dan Farmer's share saluran pemasaran IV adalah saluran pemasaran yang paling efisien, saluran pemasaran IV juga merupakan saluran pemasaran yang tersingkat dengan melibatkan 1 lembaga pemasaran hal ini sejalan dengan penelitian (Caesara et al., 2017) yang meneliti tentang pemasaran biji kopi arabika di Kabupaten Bener dengan hasil bahwa semakin banyak lembaga pemasaran yang terlibat dalam saluran pemasaran maka semakin besar pula margin pemasaran yang dihasilkan dan semakin tidak efektif saluran pemasaran tersebut.

Analisis Efisiensi Pemasaran Kopi Robusta di Desa Jambuwer Kabupaten Malang

Analisis ini digunakan untuk mengetahui apakah harga pasar mampu menggambarkan biaya pemasaran pada saluran pemasaran kopi yang meliputi biaya transportasi dan biaya processing.

1. Efisiensi Harga Berdasarkan Biaya Transportasi

Efisiensi harga dari biaya transportasi adalah dengan menghitung jumlah harga pembelian kopi dan biaya transportasi, dimana harus lebih kecil dari harga jual kopi. Dapat juga dianalisis dengan menghitung selisih antara harga jual dengan harga beli kopi pada lembaga pemasaran, dimana harus lebih besar dari biaya transportasi. Berikut ini perhitungan efisiensi harga menurut fungsi transportasi

Berdasarkan Tabel 5 dapat dilihat bahwa Fungsi pemasaran transportasi dilakukan oleh lembaga pemasaran yaitu tengkulak. Pada biaya transportasi tengkulak biaya ditanggung oleh tengkulak secara langsung. Sedangkan untuk biaya transportasi dari reseller dan pengecer dibebankan pada konsumen. lembaga pemasaran melakukan fungsi transportasi bertujuan untuk menyalurkan kopi dari petani ke lembaga pemasaran. Dari hasil diatas dapat diketahui bahwa selisih harga kopi (Rp/Kg) lebih besar dengan rata-rata biaya transportasi lembaga pemasaran pada tiap saluran pemasaran. Jadi dapat dikatakan bahwa fungsi transportasi yang dilakukan setiap lembaga pemasaran sudah sangat efisien. Hal tersebut sejalan dengan penelitian dari (Jakiyah & Sukmaya, 2020) yang dilakukan di Kabupaten Tasikmalaya pada lembaga pemasaran manggis dikatakan sudah efisien, karena rata-rata biaya yang dikeluarkan masih relatif lebih kecil dibandingkan dengan selisih harga.

Tabel 5. Tingkat Efisiensi Harga Berdasarkan Fungsi Transportasi Pada Lembaga Pemasaran

Saluran Pemasaran	Lembaga Pemasaran	Selisih Harga (Rp/Kg)	Rata-Rata Biaya Transportasi (Rp/Kg)
I	Tengkulak	1.500	80
	Pengecer	2.500	0
II	Tengkulak	70.000	100
	Reseller	25.000	0
III	Tengkulak	95.000	100
IV	Tengkulak	2000	166

2. Efisiensi Harga Berdasarkan Biaya Processing

Efisiensi harga menurut biaya processing merupakan jumlah antara harga beli dari kopi dan biaya processing yg dilakukan harus lebih kecil dari harga jual kopi. Selain itu juga dapat dianalisis melalui selisih antara harga jual dan harga beli kopi pada lembaga pemasaran, dimana harus lebih besar dari biaya processing

Tabel 6. Tingkat Efisiensi Harga Berdasarkan Fungsi processing Pada Lembaga Pemasaran

Saluran Pemasaran	Lembaga Pemasaran	Selisih Harga (Rp/Kg)	Rata-Rata Biaya Transportasi (Rp/Kg)
I	Tengkulak	1.500	280
	Pengecer	2.500	0
II	Tengkulak	70.000	28.660
	Reseller	25.000	0
III	Tengkulak	95.000	28.660
IV	Tengkulak	2000	266

Berdasarkan Tabel 6 dapat dilihat bahwa Fungsi processing dilakukan oleh lembaga pemasaran tengkulak. Tengkulak melakukan processing berupa bongkar muat, sortasi, penjemuran, pemisahan kulit kopi, peroastingan dan pengemasan. Sedangkan untuk pengecer dan reseller tidak mengeluarkan biaya processing karena pengecer dan reseller langsung menjual kopi kekonsumen tanpa melakukan proses pengolahan.. Dari hasil diatas dapat diketahui bahwa selisih harga kopi (Rp/Kg) lebih besar dengan rata-rata biaya processing lembaga pemasaran pada tiap saluran pemasaran. Jadi dapat dikatakan bahwa fungsi processing yang dilakukan setiap lembaga pemasaran sudah sangat efisien. Hal tersebut sejalan dengan penelitian (Puspasari et al., 2017) yang meneliti tentang bunga mawar potong di Desa Gunungsari berdasarkan pendekatan fungsi processing pada lembaga pemasaran bunga mawar potong di Desa Gunungsari dikatakan sudah efisien, karena rata-rata biaya yang dikeluarkan masih relatif lebih kecil dibandingkan dengan selisih harga yang didapat oleh masing-masing lembaga pemasaran bunga mawar potong.

Tabel 7. Perhitungan Nilai Indeks Efisiensi Pada Saluran Pemasaran Kopi Robustadi Desa Jambuwat Kabupaten Malang

No	Keterangan	Saluran Pemasaran			
		I	II	III	IV
1	Harga Jual Tingkat Konsumen (V)	24.000	125.000	125.000	25.000
2	Total Biaya Pemasaran (I)	280	28.660	28.660	266
3	Indeks Efisiensi Saluran Pemasaran (ME)	84,71	3,36	3,36	92,98

Dari Tabel 7 di atas dapat diketahui nilai indeks efisiensi pada saluran pemasaran I sebesar 84,71, indeks efisiensi saluran pemasaran II sebesar 3,36, indeks efisiensi saluran pemasaran III sebesar 3,36 dan indeks efisiensi saluran pemasaran IV sebesar 92,98. Semakin tinggi nilai efisiensi pemasaran kopi di setiap saluran pemasaran, maka semakin tinggi efisiensi pada saluran tersebut. Sehingga dapat disimpulkan bahwa saluran pemasaran IV adalah saluran pemasaran yang paling efisien dengan harga jual rata-rata Rp 25.000 /kg dan total biaya pemasaran Rp 266/kg, sedangkan nilai efisiensi yang terendah berada pada saluran pemasaran II dan III dengan harga jual rata-rata Rp 125.000 /kg dan total biaya pemasaran Rp 28.660/kg. Sehingga dapat dikatakan bahwa keuntungan terbesar berada pada saluran pemasaran IV dengan konsumen akhir perusahaan. Hal ini sejalan dengan penelitian yang dilakukan (Murtiningrum & Gabrienda, 2019) di lakukan Kabupaten Rejang Lebong Petani Yang diterima petani, terbesar diperoleh jika petani menjual kopinya ke industri pengolahan kopi yaitu sebesar 98,65%.

KESIMPULAN

Terdapat empat saluran pemasaran Biji Kopi Robusta Desa Jambuwer Kecamatan Kromengan Kabupaten. Dengan Nilai margin pemasaran saluran pemasaran I sebesar Rp 4.000, margin pemasaran saluran II sebesar Rp 95.000, margin pemasaran saluran III sebesar Rp 95.000 dan margin pemasaran saluran IV sebesar Rp 2.000. Hal ini menunjukkan bahwa saluran pemasaran IV lebih efisien, karena margin pemasaran yang lebih kecil dari saluran pemasaran lainnya dan jumlah lembaga pemasaran yang terlibat lebih sedikit. Nilai farmer's share pada saluran pemasaran I sebesar 84%, pada saluran pemasaran II 24%, pada saluran pemasaran III 24% dan saluran pemasaran IV sebesar 91,7%. Sehingga dapat disimpulkan bahwa saluran pemasaran IV adalah saluran pemasaran dengan nilai tertinggi. Berdasarkan Indeks Efisiensi Pemasaran menunjukkan indeks efisiensi saluran pemasaran I sebesar 84,71, indeks efisiensi saluran pemasaran II sebesar 3,36, indeks efisiensi saluran pemasaran III sebesar 3,36 dan , indeks efisiensi saluran pemasaran IV sebesar 92,98. Semakin besar indeks efisiensi pemasaran, maka akan semakin efisien. Sehingga dapat disimpulkan bahwa saluran pemasaran IV adalah saluran pemasaran yang paling efisien.

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Anas Tain	1
Angeline Yulandari	13
Dyah Erni Widyastuti	22
Gede Mekse Korri Arisena	13
Gumoyo Mumpuni	22
Harpowo	65
I Made Sudarma	13
Istis Khomah	46
Istis Baroh	65
Kanisius Siki	58
Mohamad Harisudin	46
Moh. Selby Hamzah	65
Sholvia Dwi Rahayuningsih	1
Tegar Rismanuar Nuryitmawan	32
Umbu Joka	58
Widya Ayu Pradani	46
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CONCLUSION

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