ANALYSIS OF WAKAWONDU ORGANIC RICE DEMAND IN THE BINA INSAN CITA INDONESIA COOPERATION (BICI) BARUGA DISTRICT KENDARI CITY

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ABSTRACT

This study aims to determine the factors influencing the demand for organic Wakawondu rice in the Cooperative Bina Insan Cita Indonesia (BICI) in Baruga District, Kendari City. Wakawondu organic rice is essential to research because it is one of Southeast Sulawesi's leading commodities, and no research has discussed organic Wakawondu rice. This research was conducted from June to August 2022 at the BICI Cooperative Office. The data collected in this study was collected using primary data and secondary data. Preliminary data were obtained from interviews using questionnaires with BICI cooperative members as consumers and several buyers of organic rice they met. The method of determining the sample is accidental sampling, with the number of cooperative members as many as 30 people who happen to be at the research location. The analysis used Multiple Linear Regression analysis with the Ln method (Natural logarithm). The results showed that the factors that had a significant effect simultaneously on the demand for Wakawondu organic rice in the Bina Insan Cita Indonesia Cooperative, Baruga District, Kendari City, were the price of organic rice, the price of non-organic rice (rice head), income, number of family dependents and consumer tastes.

Keywords: demand; organic rice; price; taste; Wakawondu.

INTRODUCTION

Rice is one of the primary food commodities in the life of the Indonesian people and has a long history in Indonesian political and economic policy. Economically, many people depend on rice plants for their livelihoods through farming, marketing, or processing activities. Until now, rice consumption has still been dominated by household consumption. It is a natural condition that the staple food of society is rice. It can be seen that rice consumption in households in 2019 was 20,685,619 tons, around 77.5 kg per capita per year (Nurajijah, 2022)

One agricultural commodity is organic rice. Organic rice is produced through organic agricultural cultivation without chemical fertilizers and pesticides. Organic rice has a higher selling price compared to inorganic rice, so it is only consumed by certain groups of people. Meanwhile, there is concern among farmers that consumer demand for organic rice is not as much as consumer demand for inorganic rice. The consumer segment is limited to the middle-class group. However, the high selling price of organic rice has a significant effect on farmers' total income (Made Tisnawati, 2015)

Cooperatives based on PSAK. No. 27, 2007 is a business entity that coordinates the utilization of the economic resources of its members based on cooperative principles and financial business rules to improve the standard of living of members in particular and the working area community in general (Jumaidi, 2021).

To increase income and welfare, the presence of cooperatives in marketing organic rice is necessary for selling agricultural products. It is hoped that cooperatives can take advantage of members' organic rice marketing business opportunities. With the commodities produced by
cooperatives, SMEs, and business groups that have penetrated e-commerce, they can encourage other commodities to expand marketing through cooperatives. Cooperatives have many roles in the country's economy, including building and developing economic potential and capabilities as well as improving social welfare (Erni, et al., 2021).

A cooperative is a business entity (company) whose owners and customers are the same: its members. It is the principle of cooperative identity often depicted in the triangle symbol. So, Customer = Owner = Member, where the three parties are the same person. Cooperatives are tools used by members to carry out certain functions that have been mutually agreed upon. So, it can be concluded that the success, development, and growth of a cooperative are very dependent on the active participation role of its members (Rusyana et al., 2016).

The Bina Insan Cita Indonesia Sharia Cooperative is a producer cooperative institution whose establishment aims to be a marketing forum for SME products in Southeast Sulawesi. The Bina Insan Cita Indonesia Cooperative was founded in December 2016 and already has a founding decree from the Minister of Cooperatives and SMEs. The North Buton Regional Government focuses its community economic development on four commodities, namely, wakawondou, organic rice, cashew nuts, coconut, and seaweed, built on an area basis and on an industrial scale to produce end-user products. With the products made by all North Buton commodities, partners who market the products in ready-to-sell form are needed. Based on the above objectives, the Bina Insan Cita Indonesia Cooperative sees potential for collaboration with North Buton, which can be developed in local and regional markets and even internationally.

Objective study: This is to determine the factors influencing the demand for wakawondou organic rice in the Bina Insan Cita Indonesia Cooperative (BICI) Baruga District, Kendari City. Based on the theoretical basis, several factors influence the demand for a commodity: the price of the good itself, the price of other related goods, the level of per capita income, consumer tastes, population, producers’ efforts to increase sales, and future price predictions.

Based on several previous studies, it is stated that the variables of education level, income, number of dependents, price of organic rice, and price of other goods (non-organic rice) simultaneously influence the demand for organic rice. The rice supply does not affect the increase in per capita income and population growth, but both influence the demand for rice. In detail, an increase in per capita income of 1% in the short term will increase demand for rice by 0.01%. Furthermore, an increase in population by 1% will increase demand for rice by 0.93% (Nuryanti, 2016). Previous research also stated Sunria organic rice consumers in DKI Jakarta Province had incomes above Rp. 20,000,000, and all respondents distributed part of their income to buy Sunria organic rice products at less than 0.69% for one month.

Meanwhile, the characteristics are based on consumer behavior: most respondents have consumed Sunria organic rice for health purposes. The factors that directly influence the demand for Sunria organic rice include income variables, number of family members, and income distribution, each of which has a positive impact (Eriaca, 2016). What differentiates this research from previous research is that this research measures the variable level of consumer taste for Wakawondu organic rice. This research aims To know the influencing factors _ of the request for rice wakawondu organic on Cooperative Build Human Cita Indonesia (BICI) in the District Baruga Kendari City.

MATERIALS AND METHODS

This research was carried out from August 2022 to February 2023. The location chosen for this research was the Bina Insan Cita Indonesia Cooperative in Kendari City, named Toko Ole-Ole Wakawondu. The choice of location was determined purposively based on several considerations that the BICI Cooperative, with the brand name Wakawondu Ole-Ole Shop, specifically carries superior products from North Buton, such as organic rice. The BICI Cooperative is a Business Entity and an MSME in Kendari City that partners directly with farmer cooperatives—organic rice in North Buton and as a company that markets Wakawondu Organic Rice products.

The population in the study was determined using the accidental sampling method. Random sampling is taking respondents as samples based on chance. Anyone who meets the researcher by chance can be used as a sample if the person they meet by chance is suitable as a data source (Sugiyono, 2016). As for determining the number of samples, the appropriate sample size in research is between 30 and 500 (Arikunto, 1998). In this research, the author used a quantitative approach. A quantitative approach is inferential research in the sense of concluding statistical hypothesis testing results, using empirical data from data collection through measurement (Hermawan & Amirullah, 2021).
The method used is descriptive quantitative to determine the influence or relationship between two or more variables, namely multiple linear regression analysis. This research contains one independent variable (x) and more than two dependent variables (y), so this multiple linear regression analysis is suitable.

Multiple linear regression analysis is an analysis that connects two or more independent variables with the dependent variable. To answer the problem formulation of this research, it was analyzed using the demand function formula. The variables below were chosen because they were considered to meet the criteria in the regression test or the influence of the independent variable on the dependent variable.

The demand function is mathematically formulated as follows. (St Aisyah et al., 2017)

\[ D = f (P_x, Y, P_y, T, u) \]  \hspace{1cm} (1)

Note: \( D_x = \) Amount of organic rice requested ; \( P_x = \) Price of organic rice ; \( Y = \) Consumer Income ; \( P_y = \) Price of non-organic rice ; \( T = \) Taste ; \( u = \) Other factors

The demand function above is transformed into a natural logarithm form.

\[ Y = a + \ln X_1 + \ln X_2 + \ln X_3 + \ln X_4 + \ln X_5 \]  \hspace{1cm} (2)

Note: \( a = \) Constant ; \( \ln = \) Natural logarithm ; \( X_1 = \) Price of Wakawondu organic rice ; \( X_2 = \) Price of head rice (non-organic) ; \( X_3 = \) Income ; \( X_4 = \) Number of dependents ; \( X_5 = \) Taste

The steps used in this analysis include the coefficient of determination (R). The R-value measures the closeness of the multiple regression relationship with a value between 0-1. The closer it is to 1, the stronger the relationship between the independent and dependent variables. This shows that almost all the information needed on the independent variable explains the dependent variable. Namely, when the independent variable increases, it is followed by an increase in the dependent variable. If the R2 value \( \geq 0.95 \), then the level of perfection of the regression line is 95%, while the remaining 5% is not suitable or is influenced by other variables outside the model (Bahri, 2018)

RESULTS AND DISCUSSION

Description of Respondents

Respondents in this research were cooperative members, namely 20 permanent administrators representing organic rice consumers and non-permanent cooperative management members representing organic rice customers at the Bina Insan Cita Indonesia collaborative, namely ten people. The permanent members in question are respondents who manage directly, while non-permanent members are respondents who do not order now but actively participate in business development.

Table 1. Respondent Groups According to Occupation

<table>
<thead>
<tr>
<th>No</th>
<th>Description of Respondents</th>
<th>Number (people)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Type of work</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Housewife</td>
<td>1</td>
<td>3.33</td>
</tr>
<tr>
<td></td>
<td>Self-employed</td>
<td>14</td>
<td>46.67</td>
</tr>
<tr>
<td></td>
<td>civil servants</td>
<td>13</td>
<td>43.33</td>
</tr>
<tr>
<td></td>
<td>Others (NGO)</td>
<td>2</td>
<td>6.67</td>
</tr>
<tr>
<td>2</td>
<td>Age group</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>0-14 (not yet productive)</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td></td>
<td>15-54 (Productive)</td>
<td>28</td>
<td>93.33</td>
</tr>
<tr>
<td></td>
<td>&gt;55 (Less Productive)</td>
<td>2</td>
<td>6.67</td>
</tr>
</tbody>
</table>

There were 30 respondents in this study. Shows that entrepreneurs and civil servants dominate the type of work or profession of respondents. Meanwhile, for other types of work, two people are referred to as NGOs (Non-Government Organizations) or non-governmental organizations such as NGOs, and only one housewife. Every human being needs to live their life. Basic needs are divided into food, clothing, and shelter. To fulfill these needs, everyone looks for work to earn income. A respondent's type of work dramatically influences his income. Apart from that, income is also influenced by their working hours (Putri & Setiawina, 2013)
The characteristics of respondents aged in the productive category were 28 people with a percentage of 93.33%. Meanwhile, the number of respondents in the less effective category was only two people, amounting to 6.67%. Based on Law No. 13 of 2013 concerning employment, the productive age category has an age range of 15-54 years, the unproductive category has an age range of 0-14 years, and the less effective category has an age range of 55 years and above. This research results follow empirical studies stating that age positively and significantly affects labor productivity. Age can influence a person's ability to work physically and determine and think. Apart from that, age will also affect productivity at work or its role in the decision-making process in various alternative jobs and work performance (Umawainina et al., 2019)

Factors Affecting Demand for Organic Rice

Results of parameter estimation for the influence of the independent variable (X) consisting of price of organic rice (X1), price of non-organic rice (X2), income (X3), number of family dependents (X4), and consumer tastes (X5) the demand for organic rice (Y) is presented as follows:

Table 3. Table of regression coefficient values, t_count and significance of the influencing independent variables request for organic rice at the BICI Cooperative

<table>
<thead>
<tr>
<th>Model</th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
<th>t</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>Std. Error</td>
<td>Beta</td>
<td></td>
</tr>
<tr>
<td>(Constant)</td>
<td>68.629</td>
<td>19.391</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Price of organic rice</td>
<td>-0.002</td>
<td>0.000</td>
<td>-1.101</td>
<td>-10.846</td>
</tr>
<tr>
<td>Price of head rice</td>
<td>2.521</td>
<td>1.876</td>
<td>0.077</td>
<td>1.344</td>
</tr>
<tr>
<td>Income</td>
<td>5.723E-7</td>
<td>0.000</td>
<td>0.104</td>
<td>1.650</td>
</tr>
<tr>
<td>The number of dependents</td>
<td>0.117</td>
<td>0.288</td>
<td>0.023</td>
<td>0.408</td>
</tr>
<tr>
<td>Appetite</td>
<td>-3.584</td>
<td>1.367</td>
<td>-0.239</td>
<td>-2.621</td>
</tr>
<tr>
<td>F</td>
<td>62.974</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>R Square</td>
<td>0.929</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ Y = 68.629 \cdot 0.002 \ln X_1 + 2.521 \ln X_2 + 5.723 \ln X_3 + 0.117 \ln X_4 + 3.584 \ln X_5 + e \] (3)

The equation is changed in multiple non-linear form to:

\[ Y = 0.000 X_1^{-0.002} X_2^{2.521} X_3^{5.723} X_4^{-0.117} X_5^{-3.584} e \] (4)

Apart from that, the results of the analysis also show that the correlation coefficient (r) is 0.964, which means that the variables are the price of organic rice (X1), the price of head rice (X2), income (X3), number of dependents (X4), and taste (X5) simultaneously has a close relationship with demand for organic rice. Meanwhile, the R-Square value (coefficient of determination) is 0.929, meaning that 92.9% of the variation in demand for organic rice can be explained by the independent variables included in the model. The rest is explained by other variables not included in the model. Furthermore, the analysis results obtained a calculated F value of 62.974 with a significance of 0.000 < α 0.05, so it can be said that the independent variables together (simultaneously) have a natural effect on the demand for organic rice. Then, each independent variable's calculated t-significance value is presented in the following table. Table of regression coefficient values, t_count and the significance of the independent variables that influence request for organic rice at the BICI Cooperative

The F test is carried out to find whether the independent variables together (simultaneously) influence the dependent variable. The results of the research show that the F table value is 62.974 with a significance value of 0.000 < α 0.05, so it can be concluded that hypothesis H0 is accepted, namely that together (simultaneously) the independent variables (the price of organic rice, price of head rice, number of dependents, income, and taste) have an influence significant impact on demand. The t-test was carried out to test the research hypothesis regarding the influence of each independent variable partially on the dependent variable. Decision-making is done by looking at the significance value in the coefficients table. Usually, the basis for testing regression results is carried out with a confidence level of 95% or a significance level of 5% (α = 0.05).

Calculated t values for X1, X2, X3, X4, And the significance value of the t table respectively X1 is (0.000 < α 0.05), X2 is (0.192 > α 0.05), and X4 is (0.015 < α 0.05). The basis for decision-making is that when the significance value of the t-test is < α 0.05, it partially influences the significance level α 0.05. It can be concluded that partially (individually) the regression coefficient for the price of organic
rice ($X_1$) and taste ($X_5$) has a significant effect on $Y$ (demand). In contrast, the price of non-organic rice ($X_2$), income ($X_3$), and the number of family dependents ($X_4$) have no significant effect on demand for Wakawondu organic rice.

a) Price of Organic Rice ($X_1$)

The organic rice price variable significantly negatively affects demand for Wakawondu organic rice. The regression coefficient value has a negative sign of -0.002, which means that for every 1 percent increase in the price of organic rice, demand for organic rice will decrease by 0.002 percent, assuming other variables do not change. The price of organic rice is the value or costs consumers must pay to buy organic rice. Price is one of the factors that influences a person’s decision to purchase goods or the food they consume. The higher the price of a good, the lower the demand for that good, and vice versa. This is following the law of demand. (Nuraini, 2016)

Previous research also explains that the price elasticity value for organic rice towards the demand for organic rice is 7.32. Reducing prices by 1 percent will increase demand for organic rice by 7.32 percent. The price elasticity of organic rice is elastic ($7.32 > 1$). The relationship between the price of organic rice and the quantity demanded of organic rice follows what is expressed by demand theory (Zaini et al., 2019)

According to research (Setianingsih et al., 2021), rice prices are known to have a negative and insignificant influence on rice demand. This is thought to occur because rice is a staple food and if the price increases or decreases it will not significantly affect consumption levels.

Organic rice is an implicit hedonic price because it contains several characteristics, such as variations in taste, color, fluffiness, influence preferences, interests, or just style life. And pay more To get it. Preference And interest In rice organic are reflected in behavior consuming rice organic through several stages: take decision consume, source information, frequency consumption, access purchase, type, assessment price rice organic, pluses and minuses (Elizabeth, 2022).

b) Price of Head Rice (non-organic) ($X_2$)

The price variable for non-organic rice (head rice) is 0.192, which is greater than $\alpha = 0.05$, which means that the price variable for head rice (non-organic) has an insignificant effect on the demand for Wakawondu organic rice. This is because head rice (non-organic) is not a substitute for organic rice but rather household staple rice, but the cooking method is mixed with organic rice. So even if the price of organic rice rises or falls, it does not affect the demand for head rice. As previously mentioned, the household staple food is rice (generally rice), not organic rice. However, some households consume organic rice to treat and prevent certain diseases, such as diabetes, and people are on a weight loss program.

The explanation above follows research (Rahayuningsih et al., 2016), which states that non-organic rice has no natural effect on the demand for organic rice in Boyolali Regency. This is indicated by a significance value more significant than $\alpha = 5\%$ with a partial regression coefficient value of The price of non-organic rice is 5,057 and has a negative sign. This means that the demand for organic rice is inversely proportional to the price of non-organic rice. If the price of non-organic rice rises by 1%, the demand for organic rice will fall by 5.057% or vice versa.

The price of non-organic rice includes other goods or complements to Wakawondu organic rice. Different research on rice prices on demand has a positive regression coefficient. If rice prices rise, then the demand for rice will increase. This is contrary to demand theory. Based on the theory, if the price increases, demand falls, and vice versa. If the price drops, demand rises. The positive sign of the rice price variable can be explained because rice is the leading food for the people of Padang City (Leovita & Fauzi, 2019)

Research results (Zamrodah, 2021) show a difference where the results of simultaneous regression calculations on the independent variables are 2,951, and the $F$ table is 2,420. Because the $F$ table is smaller than the calculated $F$, the hypothesis states that simultaneously, the price of organic rice and non-organic rice, income, education, consumer tastes, lifestyle, health, and purchasing access significantly influence purchasing decisions.

c) Household Income ($X_3$)

The income variable of 0.112 is more significant than $\alpha = 0.05$, which means that the income variable has no significant effect on demand for Wakawondu organic rice. This is because households with high and low incomes still want to consume organic rice. Apart from that, the taste or habits of people who consume organic rice are factors. Some consume it because they need it for treatment, and some buy organic rice for daily consumption even though the price is high and their income is low. This causes demand to change or shift to the right due to taste factors. In economic theory, taste
also influences the market for a good. This differs from previous research, which stated that the income variable really influenced consumer decisions to buy organic rice. If there is an increase in sample income of 1 (one) million rupiah, a person's opportunity to buy organic rice will increase by 13.2%. This is because the average income of organic rice consumers is higher than non-organic rice consumers (Ildrakasih et al., 2013)

Increased income increases the ability to buy goods in more significant quantities, and increased income allows buyers to replace their consumer goods from goods of lower quality to goods of better quality (Sugiarto, 2007)

Income is a factor that determines variations in demand for various types of goods because the size of income can describe consumer purchasing power. A change in income will cause changes in the consumption of multiple types of goods (Rahayuningsih et al., 2016).

d) Number of Dependents (X₄)

The significance value of the number of dependents variable is 0.687, more significant than α = 0.05. This means that the variable number of family dependents does not significantly affect the demand for Wakawondu organic rice. This is because not all household members in one household consume organic rice. So, even though a household has a relatively large number of dependents, the number of household members who consume organic rice is relatively small, and the demand for organic rice will also be small. As previously stated, when consuming organic rice, usually only the majority of consumers are in the process of treatment and prevention of diabetes (diabetes) and consumers who are on a weight loss program (diet). This follows previous research that shows that most respondents have consumed organic Sunria rice for health purposes (Eriaca, 2016). In contrast to research (Zaini et al., 2019), when the population increases, the demand for organic rice will increase, for example, when the population is 200 people with a demand for 100 kg/month. When the population reaches 400 people, demand also increases.

According to research (Risty et al., 2013), which states that at a 95% confidence level, the variable number of dependents significantly affects the demand for organic rice. This is shown in the t-test, where the calculated t-value = 4.512 > t-Table = 1.692. It can be said that rejects Ho, which states that the variable number of dependents influences the demand for organic rice. Based on the regression analysis results, the varying number of dependents has a positive regression coefficient of 0.486. This means that every 1% increase in family members will increase the demand for organic rice by 0.486%. The greater the number of family members, the greater the demand for organic rice.

The number of family members is the number of people living in one household. Usually, the number of family members influences consumption patterns, as does the consumption pattern of organic rice. This is because the more family members there are, the more expenditure and consumption there will be in one household, and there will be a variety of tastes in consuming rice daily. The price of organic rice, which is relatively more expensive than inorganic rice, tends to make rice consumers with more family members or dependents choose inorganic rice as their daily staple food or mix it with organic rice. Meanwhile, rice consumers with fewer family members or several dependents prefer organic rice as their daily staple food for health reasons (Dadas et al., 2022).

e) Consumer Tastes (X₅)

The taste variable is 0.015, which is smaller than α = 0.05, which means that the taste variable significantly affects demand for Wakawondu organic rice. The regression coefficient value is 3.584, meaning that for every 1 percent increase in taste, demand for brown rice will increase by 3.584 percent, assuming other variables remain constant. People's tastes or habits in consuming organic rice also influence the demand for organic rice. If people's taste for an item increases, demand for that item will increase as taste is one factor that influences consumer decisions in making purchases (Iksan & La Aman Tabia, 2021).

Health reasons are the main factor in consuming organic rice. This is due to the nutritional content of organic rice and the consumers' nutritional knowledge (Sulistyana et al., 2016). Apart from that, organic rice consumers choose health reasons as the main factor in consuming organic rice, distributor agent as the primary place to purchase organic rice, feel satisfied consuming organic rice, get information on the benefits of organic rice from electronic media and information on the characteristics of organic rice from distributor agents (Elizabeth, 2022).

According to research (Damayanti, 2013), the main reason for consuming organic rice is the choice of location due to good service, the intensity of continuous consumption of organic rice, and the monthly consumption per month, which reaches 10-20 kg. 22.5% of organic rice consumers in Sleman Regency consume organic rice of the pandan wangi variety with the JOL brand, which has the characteristics of a dull white rice color, the level of cleanliness of the rice washing is slightly
transparent, the aroma of the rice is fragrant, the texture of the rice is rough, the percentage of broken rice is small, the taste of the rice is slightly sweet fluffier and more durable.

The habit of consuming organic rice is carried out by a household according to their tastes and needs. There are three categories of organic rice consumption patterns: regularly, mixed, and occasionally. According to (Dadas et al., 2022), it shows that the mixed consumption pattern is the largest, namely 16 people or 40 percent of the number of sample rice consumers in Palembang City, and the least is the regular consumption pattern, namely 11 people or 27.5 percent of the number of sample rice consumers in Palembang City. This means that awareness of consuming organic rice regularly in Palembang City is still not very visible. This is also based on several factors that influence organic rice consumption patterns, namely the amount of monthly food expenditure, household consumption, duration of consumption of organic rice, number of family members, reasons for choosing organic rice, and intensity of purchasing organic rice.

CONCLUSIONS AND SUGGESTIONS

Based on the research results, it can be seen the factors that influence the demand for wakawondu organic rice at the Bina Insan Cita Indonesia Cooperative (BICI), namely price of organic rice, price of non-organic rice or head rice, income, number of family dependents, and tastes. Simultaneously, it has a significant effect on demand, while partially, the price of non-organic rice, income, and number of family dependents do not have a considerable impact. The regional government should support farmer groups to increase the production of Wakawondu organic rice as a superior commodity because there is quite a lot of demand. Government policy supporting organic farming programs is excellent if implemented continuously (sustainably). For cooperatives and MSMEs to increase sales of Wakawondu organic rice, they should continue to promote organic rice commodities at every MSME expo or on big holidays so that organic rice products can be known to the broader community.

REFERENCES


