The Effect of Farmers’ Exchange Rates on Rice Prices in 2017-2019

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ABSTRACT

This research aims to predict the price of rice in the mill according to quality (Rupiah/Kg) at a premium, medium and low levels in Indonesia. Then also to find out whether there is an effect of farmer exchange rates on the price of rice in mills at a premium level. The study used purposive sampling, namely samples in Indonesia. Data analysis using simple linear regression. The results showed that there was an effect of the farmer's exchange rate on the price of rice in the mill at the premium level of 69.16%, the farmer's exchange rate affected the price of the rice in the mill according to the quality (Rupiah/Kg) at the premium level. The recommendation that can be given is that the government can take steps to maintain the stability of farmers' currency exchange rates, especially in the face of global economic fluctuations. Appropriate fiscal and monetary policies can help reduce the risk of exchange rate volatility and have an impact on rice price stability at the mill. A robust monitoring system is needed to monitor exchange rate fluctuations and rice prices on a regular basis.

Keywords: Farmers' Exchange Rates, Rice Prices, Premium

INTRODUCTION

Research Background

Indonesia is a country that has a very wide area. In addition, fertile land can be used by the community for farming activities. Most of Indonesia's population make a living in the agricultural sector, especially farming and paddy fields. Farming and paddy fields can create livelihoods for the community, especially people in villages. The staple food in Indonesia is rice. Rice is already a political and security commodity, not only as a food or economic commodity (Kusumaningrum et al., 2010).

The issue of rice in Indonesia is also a central issue that influences national economic policy. Availability and equitable distribution of rice as well as affordability by the people's purchasing power are problems that seem to have not been resolved until now. Rice itself has a strategic value in strengthening food security, economic security, and national political security/stability. Experience in previous years and even today, shows that soaring food prices can cause shocks in society, so that the issue of rice is always a serious concern for the government and society.

At the end of August 2017, the government through the Ministry of Trade has set the Highest Retail Price (Harga Eceran Tertinggi / HET) for medium and premium rice as stated in the Regulation of the Minister of Trade of the Republic of Indonesia Number 57/M-DAG/PER/8/2017 which became effective on 1 September 2017. The determination of the HET is aimed at maintaining the stability and certainty of rice prices, affordability of rice prices to consumers and preventing price speculation. Apart from these objectives, the determination of the HET for rice is still controversial. One of them is the negative impact arising from the determination of the HET which has the potential to harm various parties, especially farmers (Dambe & Hamsiah, 2023).

Identification of problems

Based on the description of the background, several problems can be formulated that need to be examined:

1. What is the Price of Rice in the Mill by Quality (Rupiah/Kg) at premium, medium and low levels in May’19 in Indonesia?
2. Is there an effect of the farmer's exchange rate on the price of rice in the mill at a premium level?

Research purposes

Based on the identification of the problems above, the objectives of this study are as follows:

1. To forecast the price of rice in the mill according to quality (Rupiah/Kg) at premium, medium and low levels in Indonesia
2. To find out whether there is an effect of the farmer's exchange rate on the price of rice in the mill at a premium level.

Research usability

The use of this research is expected to be useful as:

1. As input for consumers so they can find out information about rice prices in May'19.
2. As information and reference material for students who conduct research related to this research.

LITERATURE REVIEW

Rice

Rice ranks first in the types of foodstuffs consumed by the Indonesian population, although consumption is decreasing. This decrease in consumption can be caused by an increase in people's welfare. The higher the income, the portion of expenditure will shift from spending on food to spending on non-food. In addition, the increase in income does not lead to an increase in consumption of carbohydrates, but switches to the fulfillment of protein, such as meat, chicken, milk, eggs, and so on. Thus, it can be concluded that the proportion of spending on rice in total spending on food at the urban and national levels is uniformly influenced by the price of rice and consumer income.

Rice Strategic Position

As a strategic commodity, the role of rice is very important for the Indonesian people. In addition to functioning to meet the basic food needs of the majority of the population, the rice sector also has close links with people's lives in various economic, social, employment, rural development and political fields. Rice issues have always been a concern of various components of society and rice issues are often a hot issue and an important agenda for the government.

The position of rice as a staple food has made this commodity an indicator of economic growth and the level of social prosperity. Rising and falling rice prices directly affect inflation and the number of poor people in Indonesia.

The government through its policies can regulate rice prices to remain stable. The government's interference is evident in the policy regarding the basic purchase price of grain. The aim of this policy is to protect consumers from high prices due to low supply during the lean season and to protect producers from low grain prices during the harvest season.

METHODOLOGY

Research Area Determination Method

The method of determining the area is determined purposively (Sekaran & Bougie, 2016), namely deliberately choosing in Indonesia.

Method of collecting data

The data used in this study used data obtained from the Central Bureau of Statistics. In this study the type of data used is annual data, namely from 2017 – 2019.

Data analysis method

Data were analyzed using a simple linear regression method (Lind et al., 2018), namely predicting the price of rice in the mill according to quality (Rupiah/Kg) at premium, medium and low levels in Indonesia:

\[ Y = a + bx \]
Information:

\[ Y_1 = \text{Premium Rice} \]
\[ Y_2 = \text{Medium Rice} \]
\[ Y_3 = \text{Low Rice} \]
\[ a = \text{constant} \]
\[ b = \text{coefficient of the regression variable} \]
\[ X = \text{month} \]

Farmers’ exchange rate data were also analyzed using a simple linear regression method with rice price data at the mill at a premium level.

RESULTS AND DISCUSSION

Price of Rice in the Mill by Quality (Rupiah/Kg)

Rice is a staple that is consumed by the majority of Indonesian people. Along with the increase in population, the need for rice is also increasing. Therefore, as consumers, we can predict the price of rice in the mill according to quality (Rupiah/Kg) at premium, medium, and low levels in Indonesia.

Table 1. Prices of Rice in the Mill According to Quality (Rupiah/Kg) at premium, medium, and low levels in May'19 in Indonesia

<table>
<thead>
<tr>
<th>Kualitas Beras</th>
<th>Januari</th>
<th>Februari</th>
<th>Maret</th>
<th>April</th>
<th>Mei</th>
<th>Juni</th>
<th>Juli</th>
<th>Agustus</th>
<th>September</th>
<th>Oktober</th>
<th>November</th>
<th>Desember</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premium</td>
<td>10111.08</td>
<td>10007.91</td>
<td>9814.53</td>
<td>9644.68</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medium</td>
<td>9902.68</td>
<td>9799.57</td>
<td>9555.35</td>
<td>9144.20</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Low</td>
<td>9536.00</td>
<td>9474.50</td>
<td>9271.13</td>
<td>8936.36</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Source: https://www.bps.go.id/
Premium

\[ Y = a + bx \]

**X** = 29th month (May’19)

\[ Y = 9422.16388888889 + (15.1213327859879 \times 29) \]

\[ Y = 9860.68254 \]

So, in May’19 the price of rice in the mill according to quality (Rupiah/Kg) at the premium level was Rp. 9,860.68254 and experienced a price increase of Rp. 396 in the previous month.
Medium

\[ Y = a + bx \]

\[ X = 29 \text{th month (May'19)} \]

\[ Y = 8844.06785714286 + (30.5352709359606 \times 29) \]

\[ Y = 9729.590714 \]

So, in May’19 the price of rice in the mill according to quality (Rupiah/Kg) at the medium level was Rp. 9,729.590714 and experienced an increase in price of Rp. 585.39 in the previous month.
Low

\[ Y = a + bx \]

X = 29th month (May'19)

\[ Y = 8460.32571428571 + (37.112881773399 \times 29) \]

\[ Y = 9536.599286 \]

So, in May'19 the price of rice in the mill according to quality (Rupiah/Kg) was at a low level of Rp. 9,536.599286 and experienced a price increase of Rp. 600.24 in the previous month.

Effect of Farmers Exchange Rate on Rice Prices in Mills at the Premium level

![Figure 1. Farmer Exchange Rates and Agricultural Household Business Exchange Rates](https://databoks.katadata.co.id/datapublish/2019/05/03/nilai-tukar-petani-april-2019-turun-049-dari-bulan-sebelumnya)

R² = 0.691609066 → 69.16%

\[ th = 4.130534169 \]

df = 11

regression test

\[ α = 5\% \]

2 sides = significant (there is influence) \[ ≠ \]
Left = not significant (no effect) \[ ≥ \] > = there is a positive influence
Right = significant (there is influence) \[ > \]

So, as much as 69.16% of the farmer's exchange rate influences the price of rice in the mill according to quality (Rupiah/Kg) at the premium level, while 30.84% is influenced by other factors.

CONCLUSION

Conclusion

Based on the results of the research and discussion described in the previous chapter, it is concluded as follows:

1. The price of rice in the mill according to quality (Rupiah/Kg) at a premium level in May’19 was Rp. 9,860.68254 and experienced a price increase of Rp. 396 in the previous month.
2. The price of rice in the mill according to quality (Rupiah/Kg) at the medium level in May’19 was Rp. 9,729.590714 and experienced an increase in price of Rp. 585.39 in the previous month.
3. The price of rice in the mill according to quality (Rupiah/Kg) at a low level in May'19 was Rp. 9,536.599286 and experienced a price increase of Rp. 600.24 in the previous month.
4. There is an influence of the farmer's exchange rate on the price of rice at the mill at the premium level, namely: as much as 69.16% of the farmer's exchange rate affects the price of rice at the mill according to quality (Rupiah/Kg) at the premium level, while 30.84% is influenced by other factors.

Implication

The finding that as much as 69.16% of the price of rice at the mill at a premium level is influenced by the farmer's exchange rate shows the importance of government intervention in maintaining the stability of the exchange rate and rice prices. The government can formulate policies that support farmers in dealing with exchange rate fluctuations, such as subsidies for fertilizers or agricultural technologies that can increase rice productivity and quality. The implications of this research show the need for protection for farmers from the risk of exchange rate fluctuations. The government can provide financial instruments or insurance mechanisms to help protect farmers' incomes and reduce the impact of exchange rate changes on rice prices.

Recommendation

The recommendation that can be given is that the government can take steps to maintain the stability of farmers' currency exchange rates, especially in the face of global economic fluctuations. Appropriate fiscal and monetary policies can help reduce the risk of exchange rate volatility and have an impact on rice price stability at the mill. A strong monitoring system is needed to monitor exchange rate fluctuations and rice prices on a regular basis. Regular analysis of the data will help detect changes in trends and provide insight into their impact on premium rice prices.

Subsequent research can use other variables such as tourism development (Nyoto et al., 2023), exchange rates (Ayodeji, 2020; Firmansyah et al., 2022; Islam et al., 2017), inflation (Abdoh et al., 2016; Mirchandani, 2013; Yunita et al., 2017), and other factors.

REFERENCES


