

## Price Sensitivity Analysis of Medium Quality Rice: Insights from Low to Middle Income Households in Gresik Regency, Indonesia

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### INFO ARTIKEL

#### Riwayat Artikel:

Received : 15 Desember 2024

Revised : 12 Januari 2025

Accepted : 20 Januari 2025

#### Keywords:

Price, Price Sensitivity, Price Sensitivity Measurement, Van Westendorp Price Sensitivity Measurement, Rice Consumption

#### Kata Kunci:

Harga, Sensitivitas Harga, Pengukuran Sensitivitas Harga, Pengukuran Sensitivitas Harga Van Westendorp, Konsumsi Beras

DOI: 10.62335

### ABSTRACT

*This study explores the price sensitivity of medium-quality rice among low-to middle-income households in Kota Baru Driyorejo, Gresik Regency, Indonesia, using the Van Westendorp Price Sensitivity Meter (PSM). Rice is the staple food for most Indonesians, particularly for low-income households where it fulfills essential caloric needs. This research identifies the acceptable price range for medium-quality rice, revealing critical thresholds: the Point of Marginal Cheapness (PMC) at Rp 10,000, the Point of Marginal Expensiveness (PME) at Rp 12,500, the Optimal Price Point (OPP) at Rp 11,000, and the Indifference Price Point (IPP) at Rp 11,500. These insights highlight the delicate balance between affordability and perceived quality, underscoring the need for strategic pricing to mitigate financial strain on vulnerable populations. A purposive sampling method targeted 335 respondents from households with monthly incomes of IDR 2,000,000 to IDR 3,500,000, ensuring the focus on those most affected by price fluctuations. The findings provide actionable guidance for policymakers and market stakeholders to develop equitable pricing strategies, stabilizing rice consumption and promoting food security. Future research should address production efficiency and expand the scope to other regions and demographics to refine pricing policies and their socioeconomic impact.*

### ABSTRAK

Penelitian ini menganalisis sensitivitas harga beras kualitas sedang di kalangan konsumen rumah tangga berpenghasilan rendah hingga menengah di Kota Baru Driyorejo, Kabupaten Gresik, Indonesia, dengan menggunakan Van Westendorp Price Sensitivity Meter (PSM). Beras merupakan makanan pokok utama bagi sebagian besar masyarakat Indonesia, terutama bagi rumah tangga berpenghasilan rendah yang bergantung padanya untuk memenuhi kebutuhan kalori. Studi ini mengidentifikasi rentang harga yang dapat diterima untuk beras kualitas sedang, dengan titik kritis berupa Point of Marginal Cheapness

(PMC) sebesar Rp 10.000, Point of Marginal Expensiveness (PME) sebesar Rp 12.500, Optimal Price Point (OPP) sebesar Rp 11.000, dan Indifference Price Point (IPP) sebesar Rp 11.500. Temuan ini menunjukkan keseimbangan antara keterjangkauan dan persepsi kualitas, serta menegaskan pentingnya penetapan harga strategis untuk mengurangi beban finansial pada kelompok rentan. Metode purposive sampling digunakan untuk mengumpulkan data dari 335 responden rumah tangga dengan pendapatan bulanan IDR 2.000.000 hingga IDR 3.500.000. Hasil penelitian ini memberikan panduan praktis bagi pembuat kebijakan dan pemangku kepentingan pasar untuk mengembangkan strategi penetapan harga yang adil, menstabilkan konsumsi beras, dan mendukung ketahanan pangan. Penelitian selanjutnya disarankan untuk mengevaluasi efisiensi produksi dan memperluas cakupan ke wilayah dan demografi lain untuk menyempurnakan kebijakan harga dan dampaknya secara sosial-ekonomi.

## INTRODUCTION

Rice is a fundamental commodity and the primary staple food for the majority of Indonesian households (Rusdi, 2023; Siswanto et al., 2018). Rice holds an unparalleled position as the staple carbohydrate source for the majority of Indonesians, transcending its role as merely a food item to become a cornerstone of cultural, economic, and social identity (Rozi et al., 2023). Despite the increasing availability of alternative carbohydrate sources, such as flour-based products, grains, and tubers, rice remains the most consumed and culturally embedded food item across the archipelago (Rusdi, 2023). This unwavering preference underscores the deep-rooted connection between rice consumption and Indonesian society, shaped by centuries of tradition, economic necessity, and government policies that prioritize rice production and distribution (Yudha & Roche, 2023; Yusrin, 2023).

In the context of Indonesia's low-income households, the reliance on rice becomes even more pronounced. For families earning modest incomes, rice is not only a staple food but also the most cost-effective means of meeting caloric needs (Fitrawaty et al., 2023; Siswanto et al., 2018). Flour-based products, grains, and tubers might be viable alternatives in theory, but their comparative costs and limited availability in rural areas often make them less feasible. Bread and processed foods, perceived as luxury items, are rarely included in daily diets among these households, further cementing rice's role as the essential carbohydrate source. The importance of rice extends beyond consumption to its impact on national food security policies (Hermawan et al., 2017). As the global food market faces challenges such as climate change, supply chain disruptions, and population growth, ensuring a steady supply of rice remains a top priority for Indonesia. Investments in agricultural technology, irrigation infrastructure, and rice storage facilities underscore the strategic importance of maintaining rice self-sufficiency. This focus aligns with the broader goal of safeguarding national food security, particularly in a country where rice shortages could have far-

reaching social and economic consequences (Aryani et al., 2015; Utami et al., 2023; Yusrin, 2023).

Price sensitivity, which reflects consumers' responsiveness to changes in price, becomes increasingly relevant in understanding the purchasing behavior of low- to middle-income households. The Price Sensitivity Meter (PSM), first introduced by Van Westendorp in 1976, provides a systematic and practical method for evaluating consumer perceptions of acceptable price ranges for a specific product. (Weinrich & Gassler, 2021). Unlike traditional approaches to demand elasticity, this method allows researchers to identify price thresholds where consumers perceive a product as too expensive or too cheap, providing insights into optimal pricing strategies (Kintler et al., 2023; Weinrich & Gassler, 2021). For households in Kota Baru Driyorejo, understanding price sensitivity for medium-quality rice can help inform pricing policies and government interventions aimed at ensuring food security and stabilizing consumption.

Rice price dynamics in Indonesia are influenced by multiple factors, including production costs, market demand, and government policies. Research has highlighted that rice prices in Indonesia are particularly volatile, which poses challenges for low-income households (Herawati et al., 2024; Hermawan et al., 2017; Utami et al., 2023). Studies have also shown that price fluctuations significantly affect household consumption patterns, especially among vulnerable populations (Fitrawaty et al., 2023). For instance, increasing rice prices can disproportionately impact low-income households, forcing them to reduce their consumption or substitute rice with less-preferred staples (Herawati et al., 2024). This underscores the need for targeted research that addresses the specific price sensitivity of medium-quality rice in regions like Gresik. Kota Baru Driyorejo, as an urban area in Gresik Regency, presents a unique case study due to its demographic and socioeconomic characteristics. With a considerable portion of its population falling into the low- to middle-income category, the area serves as a microcosm for examining the broader implications of rice price sensitivity in Indonesia. Medium-quality rice is the most commonly consumed variety among these households, given its balance of cost and quality (Herawati et al., 2024; Wahyudi et al., 2019). However, fluctuations in the price of this category can significantly influence household spending patterns, dietary habits, and overall well-being. Therefore, understanding the acceptable price thresholds for this category of rice can help stakeholders, including policymakers, retailers, and producers, develop pricing strategies that align with the financial capacities of these households.

Several studies have explored the relationship between rice prices and household consumption in Indonesia. For instance, research by Hermawan et al. (2017) identified factors influencing domestic rice prices, highlighting the interplay between supply chain inefficiencies and market dynamics. Similarly, studies in Utami et al. (2023) have examined price interdependence among different rice qualities, providing valuable insights into consumer behavior and market segmentation. These findings reinforce the importance of focusing on specific price-sensitive groups, such as low-income households, to better understand their needs and preferences. The application of the Van Westendorp PSM in this study provides a novel approach to analyzing price sensitivity among low- to middle-income households in Kota Baru Driyorejo. By identifying the acceptable price ranges for medium-quality rice, this research aims to contribute to the existing body of knowledge on consumer behavior in the Indonesian rice market. Additionally, it seeks to inform pricing strategies that can

minimize the financial burden on vulnerable households while ensuring fair market practices. The findings of this study are expected to have broader implications for policymakers and market stakeholders in developing targeted interventions that address the unique needs of low-income consumers.

## **LITERATURE REVIEW**

### **Price and Consumption**

Price is a fundamental determinant of consumer purchasing decisions, particularly for essential goods such as rice. The relationship between price and consumption is often mediated by income levels, price elasticity, and market dynamics. Research indicates that price variations significantly impact the consumption of staple goods, especially among low-income households, who allocate a larger proportion of their income to necessities (Hermawan et al., 2017; Wahyudi et al., 2019). For essential commodities like rice, price changes often result in immediate adjustments to consumption patterns (Fitrawaty et al., 2023). Studies also highlight that price thresholds for affordability and acceptability vary across regions and socioeconomic groups (Herawati et al., 2024).

In Indonesia, rice prices are heavily influenced by production costs, supply chain efficiency, and government policies. According to Utami et al. (2023), fluctuations in rice prices are not only a function of local supply and demand but also of global market trends. The government plays a crucial role in stabilizing rice prices through subsidies and price controls, aiming to protect low-income households from price shocks. However, price instability remains a challenge, particularly for medium and low quality rice, which is predominantly consumed by middle- to low-income families. Understanding these price consumption dynamics is critical for developing effective interventions to support vulnerable populations.

### **Consumption Behavior**

Consumption behavior refers to the decision-making processes and actions of individuals or groups when purchasing goods and services (Ismoyowati, 2015; Lin et al., 2010). For staple commodities such as rice, consumption behavior is shaped by a variety of factors, including cultural preferences, household income, price sensitivity, and perceived quality (Fitrawaty et al., 2023; Hermawan et al., 2017; Siswanto et al., 2018; Yusrin, 2023). Low-income households tend to prioritize affordability over quality, making price a decisive factor in their purchasing decisions. Research shows that as income levels increase, consumers often shift to higher-quality rice varieties, reflecting a preference for improved quality and nutritional value (Fitrawaty et al., 2023; Hermawan et al., 2017; Siswanto et al., 2018).

The concept of necessity also plays a critical role in shaping consumption behavior. For low- to middle-income households, rice is considered a non-negotiable necessity, which means they are less likely to reduce consumption even in the face of price increases. Instead, they may adjust their spending on other goods to accommodate higher rice prices (Herawati et al., 2024). This behavior underscores the importance of understanding the unique consumption patterns of low-income

households, particularly in regions like Gresik, where rice consumption forms a significant part of household expenditure.

### **Low-Income Families and Class Segmentation**

Low-income families are particularly vulnerable to price changes due to their limited financial resources. In Indonesia, specifically in Gresik, households with income below the 2024 minimum wage of IDR 4,642,031 (BPS, 2024), particularly those earning between IDR 2 million and IDR 3.5 million, are categorized as low- to middle-income families (Tamsah et al., 2023; Yarjuna et al., 2023). often struggling to meet basic needs. These families allocate a substantial portion of their income to food, with rice being the most significant expenditure item . As such, any price fluctuations in rice have a direct impact on their overall financial stability and food security.

Class segmentation within the rice market further influences consumer behavior and purchasing decisions. Medium-quality rice, often referred to as "standard" or "regular" rice, caters primarily to low- and middle-income households. This category of rice is perceived as providing a balance between affordability and quality, making it the preferred choice for budget-conscious consumers (Herawati et al., 2024; Yarjuna et al., 2023). However, the price sensitivity of this segment means that even minor price increases can lead to significant shifts in consumption patterns or purchasing volumes.

Previous research has emphasized the need for targeted policies to address the specific needs of low-income families in the rice market. For example, subsidies for medium-quality rice or direct cash transfers to low-income households can help mitigate the impact of price increases. Additionally, market segmentation studies highlight the importance of understanding consumer preferences within specific income brackets to develop pricing strategies that align with their financial capacities (Utami et al., 2023).

### **Price Sensitivity Meter (Van Westendorp Method)**

The Price Sensitivity Meter (PSM), developed by Van Westendorp (1976), is a widely used method for analyzing consumer perceptions of price. This approach involves asking respondents a series of questions to determine the price points at which they perceive a product as too expensive, too cheap, or acceptable. By aggregating this data, researchers can identify the optimal price range for a product, ensuring that it aligns with consumer expectations and purchasing power.

In the context of rice consumption, the PSM is particularly valuable for understanding the price sensitivity of low- and middle-income households. Research has shown that the method is effective in identifying price thresholds for essential goods, allowing policymakers and businesses to set prices that are both acceptable to consumers and sustainable for producers (Fitrawaty et al., 2023; Hermawan et al., 2017). For example, studies in Indonesia have applied the PSM to assess the price sensitivity of various rice categories, revealing significant differences in price perceptions across income groups and regions (Herawati et al., 2024).

One of the key advantages of the PSM is its ability to provide actionable insights into consumer behavior (Lewis & Shoemaker, 1997; Salamandic et al., 2014). By identifying the range of acceptable

prices for medium-quality rice, this method can help stakeholders develop pricing strategies that minimize financial burdens on low-income households while ensuring market efficiency. Additionally, the PSM can inform government policies aimed at stabilizing rice prices and enhancing food security for vulnerable populations (Hermawan et al., 2017).

### **Integration of Concepts**

The intersection of price, consumption behavior, low-income segmentation, and price sensitivity forms the foundation for understanding the dynamics of rice consumption in regions like Kota Baru Driyorejo, Gresik. Low-income households face unique challenges in managing their limited financial resources, making price sensitivity a critical factor in their purchasing decisions. The application of the Van Westendorp PSM provides a robust framework for analyzing these dynamics, offering valuable insights into acceptable price thresholds and their implications for household consumption and market stability.

Research on rice consumption and pricing in Indonesia has highlighted the importance of targeted interventions to support low-income households. For instance, studies have emphasized the need for subsidies, price stabilization policies, and market segmentation strategies to address the specific needs of this demographic (Aryani et al., 2015; Fitriwati et al., 2023; Herawati et al., 2024; Utami et al., 2023; Wahyudi et al., 2019). By focusing on medium-quality rice, which is the most commonly consumed category among low-income families, this research aims to contribute to a deeper understanding of consumer behavior and price sensitivity in the Indonesian rice market.

## **METHODOLOGY**

This study employs a direct survey approach using face-to-face interviews with consumers to gather data on price sensitivity for medium-quality rice in the Kota Baru Driyorejo (KBD) area of Gresik Regency, East Java. The purpose of this method is to obtain accurate and immediate responses from participants while ensuring clarity in the interpretation of the survey questions. The survey was conducted in four specific local markets that are widely frequented by residents of the KBD area: Pasar Mutiara, Pasar di Jalan Silindri, Pasar Driyorejo Petiken, and Pasar SBD.

### **Sampling Method**

The study utilizes a purposive sampling technique to target respondents from households with a monthly income range of IDR 2,000,000 to IDR 3,500,000. This income bracket represents the low-to middle-income segment, which is most likely to exhibit price sensitivity when purchasing staple goods such as rice. Purposive sampling was chosen to ensure that the data collected would directly reflect the consumption behavior and price sensitivity of the target population. A total of 125 respondents were selected for the study, representing a diverse range of households within the specified income category. Slovin's formula was applied to calculate the minimum required sample size (Slovin, 1960; Tejada et al., 2012), with a total population of 1,836 households in Kelurahan Gadung, Kecamatan Driyorejo, Gresik, and a standard error margin of 5%. From the calculation, it was determined that a minimum of 328 samples would be required for this research. The detailed

calculation can be seen in Table 1.

**Table 1. Sample Calculation**

Slovin Formula	Sample Calculation Using Slovin Formula
$n = \frac{N}{1 + N \cdot e^2}$ <p>N = Sampling Needed                      N = 1836 (the total population of households in Kelurahan Gadung), and                      5% margin of error (<math>e = 0.05</math>)</p>	$n = \frac{1836}{1 + 1836 \cdot (0.05)^2}$ $n = \frac{1836}{1 + 4,59}$ $n = \frac{1836}{1 + 5,59}$ $n \approx 328$

**Survey Design**

The survey questionnaire was designed based on the Price Sensitivity Meter (PSM) method developed by Westendorp (1976). This method is particularly suitable for understanding consumer price perceptions and determining acceptable price thresholds for products. The questionnaire included the following key questions related to rice pricing based on Weinrich & Gassler (2021):

1. At what price do you consider medium-quality rice to be too expensive to purchase?
2. At what price do you consider medium-quality rice to be too cheap and of questionable quality?
3. At what price do you consider medium-quality rice to be affordable and good value for money?
4. At what price do you consider medium-quality rice to be expensive but still acceptable?

These questions were asked in a face-to-face format, allowing researchers to clarify any misunderstandings and ensure that respondents fully understood the questions before providing their answers. Respondents were also asked to provide demographic information, including household size and monthly income, to verify their eligibility for the study and to better understand the context of their purchasing decisions. The Price Sensitivity Meter (PSM), introduced by Van Westendorp, is a practical tool for identifying consumer price perceptions. Four critical intersection points derived from PSM provide actionable insights into price sensitivity for medium-quality rice in Kelurahan Gadung. The Point of Marginal Cheapness (PMC), Point of Marginal Expensiveness (PME), Optimal Price Point (OPP), Indifference Price Point (IPP), and the Range of Acceptable Prices (RAP) (Lewis & Shoemaker, 1997; Raab et al., 2009).

The PMC marks the lowest price at which perceived quality deterioration outweighs affordability, resulting in reduced sales volume despite being seen as a bargain. Conversely, the PME represents the price at which consumers find a product too costly compared to its perceived value, leading to decreased demand. The OPP is the equilibrium price, where equal numbers of consumers perceive the product as too cheap or too expensive, making it the most broadly appealing price point. Meanwhile, the IPP reflects a balance where some consumers consider the product expensive, while others view it as affordable, aligning with general value expectations (Çolak & Koşan, 2021). The RAP encompasses all acceptable price levels, beyond which products are deemed either too cheap to trust

or too expensive to purchase (Harmon et al., 2007). These pricing insights allow businesses to position products effectively, leveraging market-specific price anchors such as leading brands or common price points (Kintler et al., 2023; Salamandic et al., 2014; Westendorp, 1976). The PSM framework thus serves as a strategic guide for aligning prices with consumer perceptions and maximizing market performance.

### **Data Collection Process**

The survey was conducted over a period of two weeks, from January 2 to January 15, 2025, at the four designated markets. Each market was visited on multiple days, including weekdays and weekends, to capture a diverse range of consumers. Researchers approached potential respondents at market stalls or while they were purchasing rice, ensuring that participants were actively engaged in rice-buying activities. The face-to-face approach allowed researchers to observe non-verbal cues and provide assistance when respondents needed clarification about the survey questions.

To ensure consistency and reliability in the data collection process, all interviewers were trained prior to conducting the survey. Training sessions focused on the purpose of the study, the structure of the questionnaire, and techniques for engaging with respondents. Interviewers were instructed to approach respondents politely, explain the purpose of the study, and assure them that their responses would remain confidential and be used solely for research purposes.

## **RESULT AND DISCUSSION**

### **Respondent Characteristics**

The respondents in this study represent 100% of households within an income range of IDR 2 million to 3,5 million per month, with all participants being married, living with their families, and residing in Gadung Regency, Driyorejo. In terms of gender distribution, the majority of respondents (86,3%) are women or mothers, while men or fathers account for 13,7%. Regarding the number of children, 28,1% of respondents have one child, 46,0% have two children, and 17,3% have three or more children. Additionally, 8,7% of respondents reported having no children. Family size also varies, with 12,8% of households having fewer than two members, a majority of 79,4% comprising three to four members, 6,3% with five to six members, and 1,5% with more than six members.

The age distribution shows that 6,9% of respondents are aged 26 to 30 years, 17,6% are between 31 and 40 years old, 47,2% fall within the 41 to 50 age group, and 28,4% are over 50 years old. Educational attainment indicates that 6,3% of respondents have no formal education, 27,8% completed junior high school, 60,9% graduated from senior high school, and 5,1% hold college degrees. In terms of occupation, 45,7% of respondents are housewives, 35,5% are private sector employees, 3,3% are civil servants, and 15,5% are self-employed or small business owners. These demographic characteristics highlight that the majority of respondents are women, have two children, belong to households with three to four members, and are primarily engaged as housewives or private sector employees. This demographic profile reflects the socio-economic realities of the target population, providing a robust foundation for further analysis.

## Descriptive Analysis

The descriptive statistics for the four variables highlight distinct characteristics of the respondents' price sensitivity perceptions:

1. **Too Cheap:**

This variable reflects the lowest price point respondents consider unacceptable due to perceived quality concerns. The mean value of Rp 7,534.33 and a standard deviation of Rp 2,207.33 indicate a moderate dispersion of responses, with a range from Rp 5,000 to Rp 13,750. The negative skewness value (-1.50) suggests that most responses lean towards higher price points within this range, highlighting that respondents generally perceive extremely low prices as unfavorable. The kurtosis value of 0.266 indicates a near-normal distribution, supporting the validity of the data for further analysis.

2. **Cheap:**

The mean price for this category, Rp 10,195.52, lies closer to the mid-range of the acceptable price spectrum, with a standard deviation of Rp 2,198.21. The range spans from Rp 5,500 to Rp 16,000, and the positive skewness value (0.39) suggests a slight concentration of responses at the lower end of the spectrum. The kurtosis value (-0.800) indicates a flatter distribution, which is acceptable but may suggest a slight spread of responses compared to a normal curve.

3. **Expensive:**

With a mean price of Rp 12,682.09 and a standard deviation of Rp 2,440.16, this category represents the upper threshold of what respondents consider reasonably priced. The range of values, from Rp 7,000 to Rp 18,000, coupled with a nearly symmetrical skewness (-0.108), indicates a balanced perception among respondents. The kurtosis value (-1.018), although flatter than a normal distribution, is within acceptable limits, showcasing the robustness of the data.

4. **Too Expensive:**

The highest acceptable price threshold, Rp 15,230.60, has the greatest dispersion, with a standard deviation of Rp 3,036.15 and a range from Rp 7,250 to Rp 20,000. The moderately negative skewness (-0.519) and flat kurtosis (-0.860) suggest that respondents' perceptions are somewhat spread out, with a slight tendency towards lower prices being more frequently deemed as excessively high.

## Reliability Analysis

The high reliability of the questionnaire is demonstrated by the Cronbach's Alpha value of 0.951, as presented in Table 2. This indicates that the questions are well-correlated and measure the construct of price sensitivity consistently across respondents (Yamin & Kurniawan, 2009). Despite slight variations in skewness and kurtosis for some variables, the data quality remains robust, as evidenced by the excellent reliability score.

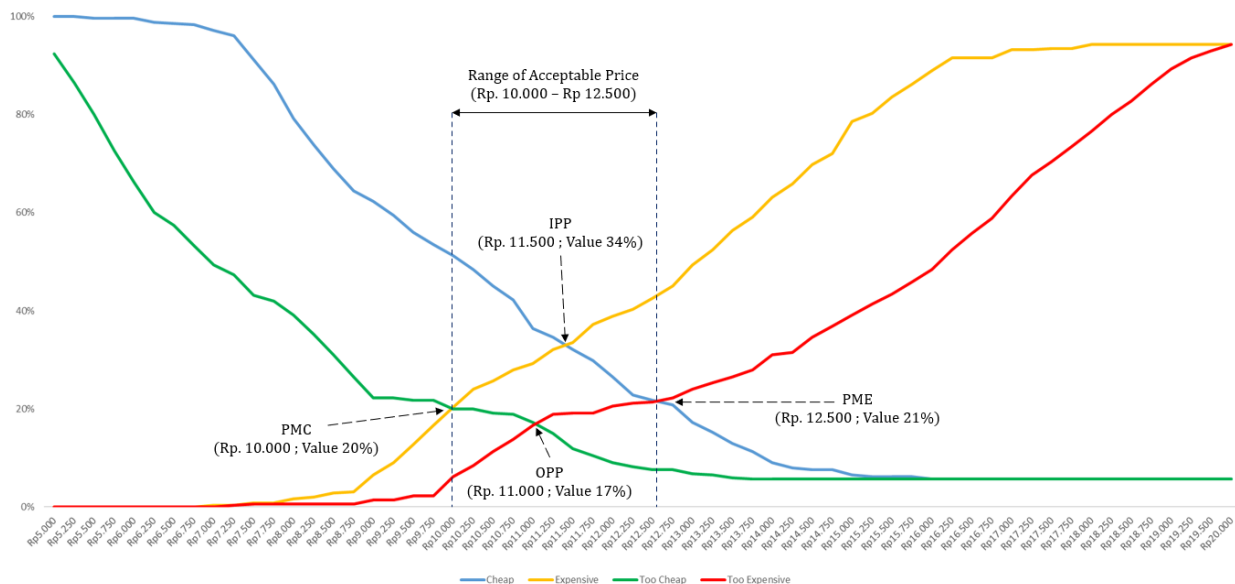
**Table 2. Reliability Test Result**

Cronbach's Alpha	Number of items
.951	4

Overall, the descriptive and reliability analyses affirm the validity of the PSM data for understanding price sensitivity among respondents. The clear differentiation between price thresholds (Too Cheap, Cheap, Expensive, and Too Expensive) provides actionable insights into acceptable pricing strategies for medium-quality rice. The findings are particularly relevant for policymakers and stakeholders aiming to stabilize rice consumption and align pricing with household financial capacities.

**PSM Result's Analysis**

The results of this study provide valuable insights into the price sensitivity of medium-quality rice among low- to middle-income households in Kota Baru Driyorejo. Based on the Van Westendorp PSM Result in Figure 1, the range of acceptable prices for medium-quality rice was identified as Rp 10,000 to Rp 12,500. Within this range, the Optimal Price Point (OPP) was determined at Rp 11,000, perceived by 17% of respondents as the ideal price. The Point of Marginal Cheapness (PMC) was found at Rp 10,000, valued by 20% of respondents as the lowest acceptable price before quality concerns arise. Conversely, the Point of Marginal Expensiveness (PME) was set at Rp 12,500, with 21% perceiving it as the highest price before the product becomes unaffordable. Notably, the Indifference Price Point (IPP), indicating a balance between perceptions of "too cheap" and "too expensive," was Rp 11,500, with 34% of respondents identifying this price.



**Figure 1. Van Westendorp Modern PSM Result**

These findings align with the introductory context, which underscores the critical role of rice as a staple food and its price sensitivity among low-income households in Indonesia. The study highlights the precarious balance these households must maintain in their spending, particularly when dealing

with essential goods like rice. The acceptable price range of Rp 10,000 to Rp 12,500 reflects the financial constraints of low-income families, who prioritize affordability while maintaining an acceptable level of quality (Hermawan et al., 2017; Rusdi, 2023; Wahyudi et al., 2019). This reinforces the notion that medium-quality rice, being the most consumed category in these households, must be priced strategically to accommodate their economic capacities.

The results further substantiate the introduction's emphasis on the interplay between price sensitivity and household well-being in urban areas like Kota Baru Driyorejo. As noted, price fluctuations in rice can disproportionately impact low-income households, compelling them to adjust their consumption patterns. The findings of this study provide a framework for policymakers and market stakeholders to develop pricing strategies that not only stabilize rice consumption but also mitigate the financial strain on vulnerable populations. By identifying optimal price thresholds, the research contributes to ensuring food security and equitable market practices, aligning with broader national goals to safeguard the availability and affordability of rice for all Indonesians.

The findings of this study offer valuable insights into the price sensitivity of medium-quality rice among low- to middle-income households in Kota Baru Driyorejo. The identified acceptable price range of Rp 10,000 to Rp 12,500 reflects the financial realities of these households, where rice serves as both a dietary staple and a critical component of daily expenditure. Within this range, the Optimal Price Point (OPP) of Rp 11,000 highlights the price most respondents perceive as ideal, balancing affordability with acceptable quality. The Indifference Price Point (IPP) of Rp 11,500 further underscores the nuanced trade-offs consumers make, indicating a threshold where perceptions of "too cheap" and "too expensive" converge.

These findings align with the introductory context, which emphasizes the central role of rice in Indonesian households and its profound price sensitivity, especially among low-income groups (Fitrawaty et al., 2023; Wahyudi et al., 2019). Price fluctuations, even within the acceptable range, can significantly influence consumption patterns, forcing households to adjust their spending on other necessities. For policymakers, these thresholds provide a critical framework for designing targeted interventions, such as subsidies or market stabilization programs, aimed at protecting low-income households from the adverse effects of price volatility.

To effectively maintain rice prices within the identified thresholds, improvements in production efficiency within the agricultural sector are essential. Greater efficiency could help stabilize production costs, ensuring that rice remains affordable without compromising quality. Investments in modern farming techniques, irrigation systems, and post-harvest technologies could reduce wastage and increase yields, making rice production more cost-effective. Furthermore, supporting small-scale farmers with access to affordable inputs and training on sustainable practices could strengthen their capacity to meet market demands at competitive prices. By enhancing efficiency across the supply chain, the agricultural sector can better adapt to the price sensitivity thresholds identified in this research, ultimately benefiting both producers and consumers.

The study also sheds light on the broader socioeconomic implications of rice pricing. Medium-quality rice, as the most consumed category in Kota Baru Driyorejo, exemplifies the balancing act between

cost efficiency and quality. Policymakers and market stakeholders must recognize this dynamic when developing strategies to ensure both accessibility and profitability. For example, government-led price monitoring systems and support for local producers could help maintain prices within the identified range, preventing undue financial strain on vulnerable populations while fostering market stability.

Moreover, the role of urban demographics in shaping consumption behavior is noteworthy. Kota Baru Driyorejo, as an urban area within Gresik Regency, offers a unique perspective on how urbanization and economic factors intersect to influence price sensitivity. This localized understanding can serve as a model for examining similar patterns in other regions, contributing to a more comprehensive national strategy for food security.

### **Limitations**

While this study provides valuable insights, it is not without limitations. The research focuses solely on Kota Baru Driyorejo, limiting its generalizability to other regions with different socioeconomic and cultural contexts. Additionally, the study does not account for seasonal variations in rice prices, which may affect price sensitivity. The reliance on self-reported data may also introduce response bias, potentially impacting the accuracy of the identified price thresholds. Future studies could address these limitations by incorporating a broader geographic scope, longitudinal data collection, and an analysis of external factors such as market trends and global economic conditions.

### **Future Research**

Future research should expand on the geographic coverage to include both rural and urban areas across Indonesia, allowing for a more comprehensive understanding of regional price sensitivity differences. Investigating the role of government subsidies and market interventions in shaping consumer behavior could also provide practical policy recommendations. Furthermore, integrating production efficiency metrics with consumer price sensitivity studies could offer a holistic approach to optimizing the rice supply chain, enhancing both sustainability and food security. Research on the impact of global economic factors, such as import-export dynamics and climate change, on rice pricing and consumption patterns would further enrich this field of study.

### **CONCLUSION**

This study highlights the critical importance of understanding price sensitivity in shaping rice consumption among low- to middle-income households in urban Indonesia. The acceptable price range of Rp 10,000 to Rp 12,500, with the Optimal Price Point at Rp 11,000, provides actionable insights for policymakers and stakeholders aiming to stabilize rice consumption and ensure food security. By identifying price thresholds that balance affordability and quality, this research contributes to the broader goal of safeguarding access to essential goods for vulnerable populations.

The findings underscore the need for strategic interventions that align pricing policies with household economic capacities, particularly in regions like Kota Baru Driyorejo. This approach not

only mitigates financial strain but also reinforces equitable market practices, supporting Indonesia's long-term food security objectives.

## REFERENCES

- Aryani, D., Susman Natawidjaja, R., Noor, T. I., & Mulyana, A. (2015). The Effectiveness of Rice Price Stabilization Policy In Indonesia. *International Journal of Science and Research*, 6, 2319–7064. <https://doi.org/10.21275/ART20177128>
- BPS. (2024). *Upah Minimum Kabupaten/Kota di Jawa Timur (Rupiah) 2024*. <https://probolinggakab.bps.go.id/id/statistics-table/2/Mjg4Izl=/upah-minimum-kabupaten-kota-di-jawa-timur>
- Çolak, O., & Koşan, L. (2021). Price Sensitivity Measurement: A Yield Management Approach. *Istanbul Business Research*, 50(1), 47–76. <https://doi.org/10.26650/ibr.2021.51.0073>
- Fitrawaty, Hermawan, W., Yusuf, M., & Maipita, I. (2023). A simulation of increasing rice price toward the disparity of income distribution: An evidence from Indonesia. *Heliyon*, 9(3), e13785. <https://doi.org/10.1016/j.heliyon.2023.e13785>
- Harmon, R. R., Unni, R., & Anderson, T. R. (2007). Price Sensitivity Measurement and New Product Pricing: A Cognitive Response Approach. *PICMET '07 - 2007 Portland International Conference on Management of Engineering & Technology*, 1961–1967. <https://doi.org/10.1109/PICMET.2007.4349523>
- Herawati, Harianto, Putri, T. A., Dewi, T. G., & Rosiana, N. (2024). Dynamics of demand sensitivity for various rice qualities faced by retailers. *BIO Web of Conferences*, 119, 02019. <https://doi.org/10.1051/bioconf/202411902019>
- Hermawan, W., Fitrawaty, F., & Maipita, I. (2017). Factors Affecting the Domestic Price of Rice in Indonesia. *Journal of Economics and Policy*, 10(1), 155–171. <https://doi.org/10.15294/jejak.v10i1.9133>
- Ismoyowati, D. (2015). Halal Food Marketing: A Case Study on Consumer Behavior of Chicken-based Processed Food Consumption in Central Part of Java, Indonesia. *Agriculture and Agricultural Science Procedia*, 3, 169–172. <https://doi.org/10.1016/j.aaspro.2015.01.033>
- Kintler, J., Remeňová, K., & Kmety, B. (2023). Price sensitivity testing as a basic tool for strategic pricing decisions. *Strategic Management*, 28(1), 20–32. <https://doi.org/10.5937/straman2200028k>
- Lewis, R. C., & Shoemaker, S. (1997). Price-Sensitivity Measurement. *Cornell Hotel and Restaurant Administration Quarterly*, 38(2), 44–54. <https://doi.org/10.1177/001088049703800223>

- Lin, P., Huang, Y., & Wang, J. (2010). Applying the theory of consumption values to choice behavior toward green products. *5th IEEE International Conference on Management of Innovation and Technology, ICMIT2010*, 348–353. <https://doi.org/10.1109/ICMIT.2010.5492714>
- Raab, C., Mayer, K., Kim, Y. S., & Shoemaker, S. (2009). Price-sensitivity measurement: A tool for restaurant menu pricing. *Journal of Hospitality and Tourism Research*, 33(1), 93–105. <https://doi.org/10.1177/1096348008329659>
- Rozi, F., Santoso, A. B., Mahendri, I. G. A. P., Hutapea, R. T. P., Wamaer, D., Siagian, V., Elisabeth, D. A. A., Sugiono, S., Handoko, H., Subagio, H., & Syam, A. (2023). Indonesian market demand patterns for food commodity sources of carbohydrates in facing the global food crisis. *Heliyon*, 9(6). <https://doi.org/10.1016/j.heliyon.2023.e16809>
- Rusdi, M. (2023). VARIETY OF STAPLE FOODS: Perceptions of Indonesian Society on Other Staple Foods of Rice. *AKADEMIK: Jurnal Mahasiswa Humanis*, 3(1), 41–48.
- Salamandic, E., Alijosiene, S., & Gudonavičienė, R. (2014). Price Sensitivity Measurement Depending on Brand Awareness: A Case of Ziede Brand. *Procedia - Social and Behavioral Sciences*, 156, 473–478. <https://doi.org/10.1016/j.sbspro.2014.11.224>
- Siswanto, E., Marulitua Sinaga, B., & Harianto, . (2018). The Impact of Rice Policy on Rice Market and The Welfare of Rice Producers and Consumers in Indonesia. *Jurnal Ilmu Pertanian Indonesia*, 23(2), 93–100. <https://doi.org/10.18343/jipi.23.2.93>
- Slovin, E. (1960). *Slovin's Formula for Sampling Technique*.
- Tamsah, H., Ilyas, G. B., Nurung, J., & Yusriadi, Y. (2023). Model Testing and Contribution of Antecedent Variable to Absolute Poverty: Low Income Family Perspective in Indonesia. *Sustainability*, 15(8), 6894. <https://doi.org/10.3390/su15086894>
- Tejada, J. J., Raymond, J., & Punzalan, B. (2012). On the Misuse of Slovin's Formula. *The Philippine Statistician*, 61, 129–136.
- Utami, A. D., Harianto, H., & Krisnamurthi, B. (2023). Exploring the pattern of price interdependence in rice market in Indonesia in the presence of quality differential. *Cogent Economics & Finance*, 11(1). <https://doi.org/10.1080/23322039.2023.2178123>
- Wahyudi, A., Kuwornu, J. K. M., Gunawan, E., Datta, A., & Nguyen, L. T. (2019). Factors Influencing the Frequency of Consumers' Purchases of Locally-Produced Rice in Indonesia: A Poisson Regression Analysis. *Agriculture*, 9(6), 117. <https://doi.org/10.3390/agriculture9060117>
- Weinrich, R., & Gassler, B. (2021). Beyond classical van Westendorp: Assessing price sensitivity for variants of algae-based meat substitutes. *Journal of Retailing and Consumer Services*, 63, 102719. <https://doi.org/10.1016/j.jretconser.2021.102719>
- Westendorp, V. (1976). NSS-Price Sensitivity Meter (PSM) – A new approach to study consumer perception of price. *Proceedings of the 29th ESOMAR Congress*, 139–167. <https://archive.researchworld.com/a-new-approach-to-study-consumer-perception-of-price/>

Yamin, S., & Kurniawan, H. (2009). *SPSS COMPLETE: Teknik Analisis Statistik Terlengkap dengan software SPSS*. Salemba Infotek.

Yarjuna, H., Bagas Satrio, A., Safli Fahrudin, M., & Adam Siregar, M. (2023). Family characteristics and income: Evidence from Indonesia. *Sebelas Maret Business Review*, 8(1), 20–29.  
<https://jurnal.uns.ac.id/snbr>

Yudha, E. P., & Roche, J. (2023). How Was the Staple Food Supply Chain in Indonesia Affected by COVID-19? *Economies*, 11(12). <https://doi.org/10.3390/economies11120292>

Yusrin, N. A. (2023). *THE ANALYSIS OF RICE MASSIVE IMPORTING IN INDONESIA BASED ON MACROECONOMICS, MICROECONOMICS, INTERNATIONAL ECONOMICS AND POLITIC ECONOMICS* (Vol. 15, Issue 2).