



Rice Price Stabilization: Government Solution to Overcome Market Failure and Improve Farmers' Welfare in Indonesia

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ABSTRACT

Background: Rice prices in Indonesia often fluctuate due to market failures, such as weak bargaining power of farmers and the dominance of middlemen in the distribution chain. These conditions disadvantage farmers and highlight the importance of government intervention to stabilize prices and improve farmer welfare.

Purpose: This study aims to analyze the role of government intervention in stabilizing rice prices as an effort to address market failures and enhance farmer welfare in Indonesia.

Methods: This study employs a literature review approach by examining various scholarly sources, policy documents, and previous research related to floor price policies, agricultural input subsidies, the strengthening of buffer institutions, and the development of agricultural infrastructure.

Results: The findings indicate that floor price policies provide minimum price guarantees for farmers. Agricultural input subsidies reduce production costs and increase yields. In addition, buffer institutions such as Bulog and farmer cooperatives play a crucial role in absorbing harvests and maintaining supply stability. The development of agricultural infrastructure also contributes significantly to distribution efficiency and increased productivity.

Conclusions: Integrated and consistent government intervention is essential to create a fair, sustainable, and farmer-oriented agricultural ecosystem. Strengthening price policies, improving subsidy effectiveness, and enhancing agricultural infrastructure and institutional capacity are key strategies to support long-term agricultural resilience.

Research Contribution: This study contributes by providing a comprehensive synthesis of various forms of government intervention in rice price stabilization and emphasizing the importance of an integrated policy approach to address market failures and improve farmer welfare in Indonesia.

Keywords: Rice price stabilization, Government intervention, Farmers' welfare.

INTRODUCTION

Agriculture plays a vital role in supporting food security and maintaining national economic stability, particularly in an agrarian country like Indonesia (Segati, 2021). Within Indonesia's economic structure, the agricultural sector not only provides food but also absorbs a large workforce, particularly in rural areas. Amid global challenges such as climate change, the food crisis, and geopolitical uncertainty, the resilience of the agricultural sector is becoming increasingly important. Food commodities, particularly rice, hold strategic value because rice is the staple food for the majority of Indonesians. Therefore, conditions affecting rice prices and production have broad implications, both for the national economy and social

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stability.

However, the reality on the ground shows that rice farmers are often the most vulnerable group in the agricultural supply chain. Rice price instability is a classic problem that recurs every harvest season. During peak harvests, rice prices often plummet due to a flood of supply in the market, while farmers lack strong bargaining power. In this context, the market fails to fulfill its role as a fair mechanism for distributing profits proportionally. This phenomenon is known as market failure, a situation where market mechanisms fail to produce an efficient and equitable distribution of resources and do not reflect the social value of a commodity (Bmt & Lerang, 2022).

In public economics, market failure provides a rationale for government intervention (Mazzucato, 2024). Markets do not always function perfectly, especially in vital yet vulnerable sectors such as agriculture. One concrete form of market failure is the disparity between the selling price of agricultural products at the farm level and the price received by the end consumer. This disparity is not solely caused by free market mechanisms, but also by the dominance of middlemen or middlemen, limited access to information and capital for farmers, and weaknesses in the distribution system. As a result, farmers are often the most disadvantaged parties in the production chain, even though they are the primary actors in the food cultivation and supply process.

Government intervention is crucial to correct this imbalance. In this regard, the government has a responsibility to balance the interests of producers (farmers), consumers, and other market actors through appropriate policies (Zebua, 2022). One common form of intervention is the establishment of a floor price, which aims to guarantee a minimum price so that farmers do not suffer losses when market prices fall. Furthermore, subsidies for agricultural inputs such as fertilizer and seeds are also important instruments for reducing production costs and increasing farmer competitiveness.

Furthermore, the existence of harvest absorption institutions such as Bulog, farmer cooperatives, and village-owned enterprises (BUMDes) plays a crucial role in stabilizing prices and absorbing excess production during the main harvest (Haq, 2022). Without these institutions, farmers would become increasingly dependent on middlemen and vulnerable to market price fluctuations. Improvements in agricultural infrastructure, such as road access, irrigation, and storage facilities, also contribute significantly to distribution efficiency and reduced post-harvest losses. All of these policies, if designed and implemented synergistically, will create a more resilient and equitable agricultural system.

In addition to its economic impact, unstable rice prices also have social and political repercussions (Bmt & Lerang, 2022). The welfare gap between rural and urban areas has the potential to widen, driving urbanization and triggering social insecurity. Farmers who are consistently disadvantaged may lose their incentive to continue growing rice, thus risking long-term disruption to national food security. In a worst-case scenario, the country could face a food crisis, leading to increased dependence on imports and weakening food sovereignty. Therefore, stabilizing rice prices is not solely related to economic aspects, but also concerns sustainable development, equitable distribution of prosperity, and national resilience. In this context, this article examines in more depth the role of the state in stabilizing rice prices as a manifestation of public economic responsibility to address market failures, create positive externalities, and ensure farmer welfare. Based on the principles of public economics, this article is expected to provide a comprehensive understanding of the urgency of government intervention in creating a just,

inclusive, and sustainable agricultural ecosystem. The novelty of this research lies in its attempt to examine rice price stabilization not only as an agricultural policy issue, but also as part of public economic responsibility directly related to correcting market failures, creating positive externalities, and strengthening national food security.

The data sources for this study were obtained from various scientifically validated secondary literature, including articles from national and international academic journals published in the last five years, textbooks on public and agricultural economics, policy reports from government agencies such as the Ministry of Agriculture and the Statistics Indonesia (BPS), and official documents from international organizations such as the FAO and the World Bank that address food issues, price stabilization, and farmer welfare. Data collection was conducted through a systematic literature review utilizing various scientific databases, such as Google Scholar, ScienceDirect, SpringerLink, and university repositories, to locate and access relevant literature. Each source obtained was then selected based on its topic suitability, author credibility, and contribution to the discussion of the concepts being analyzed. After data collection, this study used content analysis techniques to identify key themes, patterns of relationships between variables, and various policy approaches implemented by the government to address rice price fluctuations. The analysis process is carried out inductively, namely by drawing conclusions from various findings of previous studies in order to formulate a comprehensive picture according to the Indonesian context, so that the research results are expected to enrich understanding regarding the importance of the government's role in creating a more equitable, stable, and sustainable agricultural system.

RESULTS AND DISCUSSION

Market Failure in the Agricultural Sector

The ideal market in neoclassical economic theory operates based on the principle of equilibrium between supply and demand (Tsoulfidis, 2024). Under these conditions, prices are determined efficiently through market mechanisms and are able to proportionally reflect the interests of both producers and consumers. However, this ideal condition is difficult to achieve in practice, especially in the agricultural sector, which is heavily influenced by seasonal factors, distribution limitations, and a market structure that is not fully competitive. As a result, market mechanisms are not always able to produce a fair and efficient allocation of resources.

In the context of Indonesian agriculture, rice is one of the sectors most vulnerable to market failure. Phenomena such as extreme price fluctuations, information asymmetry, and the weak bargaining position of farmers indicate a clear imbalance in the national agricultural market structure. Farmers often lack adequate information regarding market prices, distribution access, or more profitable sales opportunities. This situation demonstrates that the market does not function perfectly as assumed in neoclassical economic theory (Nia & Daud, 2023).

This situation becomes even more pronounced during the main harvest. When production increases significantly simultaneously, rice supply in the market surges sharply, while demand remains relatively stable. This imbalance drives rice prices down drastically. In situations like this, farmers, as primary producers, are the ones most disadvantaged because they lack the capacity to hold off on selling until prices stabilize. Limited storage facilities, weak access to supporting institutions, and limited market reach often leave farmers with no choice but to sell their crops at low

prices.

Furthermore, this situation exacerbates the cycle of poverty among farmers and has a ripple effect on the sustainability of the agricultural sector. Low incomes make it difficult for farmers to meet production needs for the next planting season, including purchasing seeds, fertilizers, and other agricultural inputs. In the long term, this situation can reduce farmers' incentives to continue growing rice, potentially disrupting the stability of national food production. Therefore, the issue of rice price fluctuations cannot be viewed as a simple market issue, but rather as a structural problem that requires serious attention and appropriate policy intervention (Reza, 2021).

The Role of Government as an Intervention for Price Stabilization

In public economic theory, the government plays a crucial role in intervening when market mechanisms fail to operate efficiently and fairly. This intervention is necessary to address various forms of market failure, such as price distortion, unequal income distribution, and weak protection for vulnerable economic groups. In this context, the state serves not only as a regulator but also as a guarantor of economic efficiency and distributive justice for all market participants, including farmers as primary food producers (Isharyanto, 2018).

One form of government intervention in the agricultural sector is through price stabilization policies (Raihan, 2023). This policy is designed to prevent sharp fluctuations in the prices of agricultural commodities, particularly rice. Price stability is crucial because the agricultural sector is vulnerable to seasonal changes, production uncertainty, and distribution fluctuations. Without intervention, farmers are often the most disadvantaged when crop prices fall when supply increases.

In Indonesia, the implementation of price stabilization policies is carried out, among others, through the State Logistics Agency (Bulog), which runs a program to purchase unhusked rice and rice from farmers based on the Government Purchase Price (HPP). This policy aims to protect farmers' incomes when market prices fall below the established reference price. Furthermore, price stabilization also plays a strategic role in maintaining the availability of rice supplies and affordability for the public, given that rice is a staple food commodity that plays a central role in national social and economic life (Jati, 2019).

The effectiveness of this government intervention can be seen from empirical data, which shows a positive impact on grain prices at the farmer level. According to data from the Central Statistics Agency (BPS), when Bulog increased its grain procurement volume during the 2022 harvest season, grain prices at the farmer level rose by an average of 8.4% compared to the previous year. This finding indicates that government intervention not only serves as an instrument to protect farmers' incomes but also creates more stable market signals. Thus, price stabilization policy can be understood as a crucial public economic instrument to support farmer welfare while strengthening national food security.

The Impact of Price Stabilization on Farmers' Welfare

Farmer welfare can be measured through several key indicators, such as income levels, purchasing power, and the sustainability of farming businesses. In this context, rice price stabilization policies play a strategic role because they guarantee minimum prices, making farmers' incomes more predictable. This certainty is crucial, given that farmers are highly vulnerable to market dynamics, seasonal changes, and climate uncertainty, which can impact production and crop prices

(Purwaningrat et al., 2020).

Price stabilization policies not only protect income but also contribute to the sustainability of agricultural activities. When farmers are assured that their crops will be fairly priced, they tend to be more motivated to continue managing their farming operations. Thus, price stabilization is a crucial instrument for maintaining sustainable rice production while simultaneously fostering stronger food security.

Numerous studies support this view. Several studies, such as those by Nuryanti and Swastika (Juihardi, 2023), show that minimum price guarantees can increase farmers' interest in continuing farming and encourage the adoption of more modern agricultural technologies. Furthermore, price stabilization policies also have the potential to reduce farmers' dependence on middlemen, who have often been the dominant intermediaries in the distribution chain and often put them at a disadvantage.

However, the effectiveness of price stabilization policies is still heavily influenced by various factors in their implementation on the ground. Bulog's capacity to absorb unhusked rice, farmers' access to information on the Government Purchase Price (HPP), and the availability of logistics and rice storage facilities are all crucial elements determining the policy's success. In some regions, farmers still face obstacles in selling their harvests to Bulog due to limited warehouse space, remote distribution access, or complicated administrative procedures. Therefore, institutional strengthening, simplifying absorption mechanisms, and expanding access to information are crucial steps to ensure that price stabilization policies are truly effective in improving farmer welfare across the board.

Institutions and Infrastructure as Support for Stabilization

The success of rice price stabilization is not solely determined by the existence of pricing policies, but also depends heavily on the strength of agricultural institutions and the support of adequate distribution infrastructure. Price policies that are not accompanied by strengthening support systems will only have short-term impacts and will not be able to resolve structural issues in the agricultural supply chain. Therefore, a price stabilization approach needs to be placed within a more comprehensive and sustainable agricultural development framework (Wahyudi, 2018).

Agricultural institutions play a crucial role in strengthening farmers' position in the market. Institutions such as farmer cooperatives, farmer groups, and Village-Owned Enterprises (BUMDes) can serve as collective platforms for farmers to consolidate harvests, increase marketing efficiency, and strengthen bargaining power with traders and large purchasing institutions. With strong institutions, farmers no longer face individual market challenges but instead have a shared platform that can protect their economic interests.

Furthermore, these institutions also serve as a liaison between farmers and supporting institutions such as Bulog. This role is crucial because farmers often face obstacles in accessing formal markets due to limited information, administrative constraints, and production scale. Through cooperatives, farmer groups, or agricultural BUMDes (Village-Owned Enterprises), the distribution of harvests can be carried out in a more organized and efficient manner, thus increasing farmers' opportunities to obtain more reasonable prices.

Furthermore, distribution infrastructure is an equally crucial factor in supporting the successful stabilization of rice prices. The development of farm roads, storage warehouses, and digital logistics systems are key requirements for smooth distribution and efficient supply costs. Good infrastructure allows for faster

distribution of harvests, reduces the risk of damage, and expands farmers' access to more competitive markets. Therefore, the synergy between pricing policies, agricultural institutions, and infrastructure development is the main foundation for creating a more equitable, efficient, and sustainable distribution system (Mamoriska et al., 2020).

Rice Price Volatility as a Symptom of Market Failure

Rice price volatility in Indonesia is one of the most obvious symptoms of market failure in the agricultural sector, particularly for small-scale rice farmers (Habibi, 2022). This phenomenon occurs almost every peak harvest season, when an abundant rice supply causes farm-level prices to plummet. Farmers who lack storage capacity or access to post-harvest facilities are forced to sell their crops at very low prices to prevent product damage (Muttaqin, 2012). This situation places farmers in a highly vulnerable and disadvantaged position, as their incomes are not commensurate with production costs.

Market mechanisms, which ideally balance prices through the interaction of supply and demand, in reality fail to achieve a fair balance. The distribution chain is dominated by middlemen or informal collectors who purchase rice from farmers at prices far below consumer market prices. Middlemen exploit farmers' weak bargaining power, limited access to information, and limited capital. Meanwhile, rice prices at the consumer level remain high, resulting in price distortions and unequal distribution of profits along the supply chain.

Empirical research shows that rice price volatility in Indonesia is driven more by internal variations in the domestic market than by external factors such as international prices or global stocks. An econometric study of national rice price data over nearly a decade shows that domestic rice price fluctuations are significantly higher than those of other agricultural commodities. This significantly impacts poor rural households, who act as both rice producers and consumers. The imbalance between production and market prices severely impacts poor households and those on the brink of poverty.

Socio-Economic Impact of Rice Price Volatility

Rice price instability not only impacts the economy but also triggers social and political problems. The welfare gap between rural and urban areas is widening, driving urbanization and causing social unrest in rural areas (Abidin, 2015). Farmers who are consistently at a disadvantage lose their motivation to cultivate rice, thus threatening long-term national food security. In the worst-case scenario, the country could face a food crisis, leading to dependence on imports and a decline in national food sovereignty.

Furthermore, policies regulating the distribution of domestic agricultural products that do not favor farmers also exacerbate the situation. Government efforts to provide affordable food for the people often sacrifice the interests of farmers, as purchasing prices for agricultural products are set at relatively low levels. Consequently, farmers' incomes remain low and their welfare declines. If agricultural production costs continue to rise while government subsidies decrease, farmers' profit margins are further eroded, and they are forced to go into debt to meet daily needs.

The Role of the State in Stabilizing Prices and Improving Farmers' Welfare

Market failures in the agricultural sector provide a rational basis for government intervention. The state has a responsibility to balance the interests of producers

(farmers), consumers, and other market actors through appropriate policies. One of the most common forms of intervention is the establishment of a floor price, which aims to guarantee a minimum price for farmers when market prices fall. This policy is crucial for protecting farmers from losses and providing income security, thus maintaining their motivation to produce (Itang, 2017).

The Indonesian government has established a price policy for Harvested Dry Unhusked Rice (GKP) at the farm level of IDR 6,500 per kilogram by 2025. This policy is expected to provide reasonable and profitable price certainty for farmers and encourage them to continue producing. The government also provides subsidies for agricultural inputs such as fertilizer and seeds to reduce production costs and increase farmer competitiveness. Furthermore, harvest absorption institutions such as Bulog, farmer cooperatives, and Village-Owned Enterprises (BUMDes) play a crucial role in stabilizing prices and absorbing excess production during the main harvest.

Improvements in agricultural infrastructure, such as road access, irrigation, and storage facilities, are also crucial for increasing distribution efficiency and reducing post-harvest losses. With adequate infrastructure, logistics costs can be reduced, harvest distribution smoother, and losses due to declining rice quality can be minimized. All of these policies, if designed and implemented synergistically, will create a more resilient, equitable, and sustainable agricultural system.

Critical Analysis and Policy Implications

Although government intervention in stabilizing rice prices is essential, the effectiveness of these policies is largely determined by the quality of their implementation on the ground. In many cases, normatively designed policies do not necessarily produce optimal impacts without the support of good governance. Key challenges that frequently arise include weak inter-agency coordination, budget constraints, and low institutional capacity at the local level. These conditions can hinder the absorption of harvested crops, the distribution of subsidies, and the oversight of price stabilization program implementation (Abidin, 2015).

Furthermore, the complexity of agricultural issues demands more synergistic cooperation between the central government, regional governments, harvest absorption institutions, and farmer organizations. This synergy is crucial to ensure that each formulated policy is not implemented in isolation but rather supports each other within an integrated policy framework. With strong coordination, the implementation of price stabilization programs can be more effective, more targeted, and able to address the needs of farmers in various regions with varying characteristics.

Transparency and accountability are also crucial factors in determining the success of the policy. The distribution of subsidies and the implementation of price stabilization programs must be conducted transparently, measurably, and accountably to prevent abuse of authority and budget leakage. Good transparency not only increases public trust in government policies but also ensures that program benefits truly reach farmers, the primary target group.

Furthermore, active farmer participation in policy formulation, implementation, and evaluation needs to be strengthened. Farmer involvement is crucial to ensure that the resulting policies are not merely top-down but truly reflect the needs, challenges, and real conditions on the ground. Thus, a critical analysis of rice price stabilization policies demonstrates that the success of government interventions depends not only on policy design but also on the quality of implementation, institutional strengthening, transparent governance, and

sustained farmer participation.

CONCLUSION

The instability of rice prices in Indonesia demonstrates that market mechanisms have not been able to protect farmers fairly, necessitating government intervention to address market failures, safeguard farmer welfare, and strengthen national food security. Based on the discussion, policies on floor pricing, agricultural input subsidies, strengthening supporting institutions such as Bulog and farmer cooperatives, and agricultural infrastructure development have proven to play a significant role in mitigating the impact of price fluctuations, providing income certainty, and supporting the sustainability of farming businesses. However, the success of these policies is largely determined by inter-institutional synergy, effective implementation, transparent governance, and active farmer involvement in the policy process. Therefore, rice price stabilization needs to be viewed as a comprehensive, equitable, and sustainable development strategy, capable of creating a stronger, more independent, and more resilient agricultural ecosystem to market fluctuations while addressing the structural issues underlying the weak protection of farmers in Indonesia.

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CONFLICTS OF INTEREST

The author declares no conflict of interest.

AUTHOR CONTRIBUTIONS

All authors contributed to the conception and design of the study. Material preparation, data collection, analysis, and manuscript writing were performed collaboratively by all authors. All authors read and approved the final manuscript.

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DATA AVAILABILITY

Data sharing is not applicable to this article because no new data were created or analyzed in this study.

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