Evaluating Organic Rice Marketing Performance and Farmers' Reversion to Conventional Farming: Evidence from Purbalingga Regency, Indonesia

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Abstract

Organic rice farming has the potential to provide economic and environmental benefits. In Penolih Village, Kaligondang District, Purbalingga Regency, organic rice production was certified by INOFICE from 2018 to 2020, but the certification was withdrawn in 2021. Subsequently, some farmers returned to conventional farming. This study examines the market structure, marketing patterns, and marketing performance of organic rice to identify marketing conditions associated with farmers' decisions to return to conventional farming. The study involved 41 farmers who had previously practiced organic rice farming, as well as rice collectors and consumers. Data were collected through structured interviews and analyzed using descriptive and comparative-descriptive methods, focusing on marketing channels, prices, marketing margins, margin distribution, farmer's share, and market access. Two marketing channels were identified: (1) farmer–consumer and (2) farmer–collector–consumer. The results show a marketing margin of IDR 6,698/kg, a margin distribution of 49.61%, and a farmer's share of 50.39% in the intermediary channel, compared with 100% in direct marketing. Limited market access and unequal value distribution may reduce the attractiveness and sustainability of organic rice farming. Strengthening direct market linkages and collective marketing institutions is therefore essential to increase farmers' returns and sustain organic rice production.

Keywords: organic rice, marketing margin, farmer's share, failure of organic rice cultivation.

I. Introduction

Currently, people are becoming increasingly aware of the importance of health and investing in a healthy body for their old age. This trend has driven a recent surge in demand for organic rice. Rice generally has a high glycemic index and can contribute to health conditions such as obesity and diabetes complications if consumed excessively. Beyond these concerns regarding daily rice consumption, the public also faces potential exposure to pesticide residues remaining on rice from pesticide application during cultivation. Continuous consumption of rice containing pesticide residues can lead to toxicity and health disorders in the human body (Djojosumarto, 2008).

Organic rice cultivation serves as an alternative for sustainable agricultural development. In practice, the sustainability of the organic cultivation system is determined not only by production aspects but also by farmers' ability to market their harvest and obtain adequate profits. In Kaligondang District, Purbalingga Regency, a shift from organic to conventional rice cultivation has taken place, making it an interesting phenomenon to study, particularly regarding marketing issues that potentially influence farmers' decisions. A total of 68 rice farmers in Penolih Village, Kaligondang District, were recorded as successfully obtaining organic rice certification from INOFICE in 2018, establishing the area as an organic rice center in Purbalingga Regency. However, in 2021, obstacles arose regarding INOFICE certification renewal, limited market access, and a lack of assistance for farmers, causing several farmers to return to conventional methods. In practice, only 41 respondent farmers remain actively engaged in rice cultivation using both conventional and organic systems.

Organic rice represents an important commodity in the development of organic agriculture in Indonesia. Nevertheless, the marketing of organic rice faces several challenges, including limited market access, inadequate distribution networks, inconsistent product demand, and difficulties in maintaining organic certification. Mardalisa et al. (2023) found that limited market access could prevent farmers from selling their entire harvest as organic rice. Consequently, some products were sold at prices comparable to conventional rice, reducing the potential economic benefits of organic production.

The marketing of organic rice involves a series of activities that connect farmers with consumers through various marketing institutions. These activities include product collection, processing, grading, packaging, transportation, promotion, and distribution. The effectiveness of these activities influences the prices received by farmers and the availability of organic rice in consumer markets. Therefore, evaluating organic rice marketing performance is important for understanding whether the marketing system provides

adequate economic incentives to farmers and supports the continuity of organic rice production.

One marketing obstacle that can affect the sustainability of organic farming is limited market access and suboptimal selling price certainty. Organic products have the potential to offer added value; however, this advantage does not necessarily guarantee higher profits unless supported by consumers willing to pay a premium price and the presence of adequate marketing channels. Phenomena such as the lapse of existing organic certifications, limited promotion, weak product branding, restricted partnership networks, and limited access to specialized markets make organic rice difficult to distinguish from conventional rice. This condition potentially reduces the economic incentive for farmers to maintain organic cultivation systems.

These issues are also related to long marketing chains and weak farmer bargaining power. When farmers rely on intermediaries and lack strong marketing institutions, the added value of organic products may not be fully realized by the producers. Conversely, the more commonly used conventional unhusked rice marketing system offers transaction convenience and broader access to buyers. Under these conditions, farmers may consider shifting to conventional systems because they are perceived as more practical, offer assured output absorption, or provide returns that better meet household needs.

Marketing channels can generally be classified into direct and indirect channels. Direct marketing occurs when farmers sell their products directly to consumers without involving intermediaries. Indirect marketing involves one or more marketing institutions between producers and consumers. The selection of a marketing channel may influence transaction costs, selling prices, product distribution, and the proportion of the final consumer price received by farmers.

In organic rice marketing, the role of marketing institutions is particularly important because organic products require market recognition, quality assurance, and appropriate distribution arrangements. Farmer groups and cooperatives may facilitate collective marketing, improve farmers' bargaining positions, and establish relationships with buyers. However, the effectiveness of these institutions depends on their capacity to maintain product quality, coordinate supply, and develop sustainable market relationships.

Yonida et al. (2023), in their study of organic rice marketing in Purworejo Regency, found that the longest marketing channel generated the highest marketing margin and the lowest farmers' share. In contrast, the shortest channel had the lowest marketing margin and was identified as the most efficient channel. Similarly, Mardalisa et al. (2023) identified four

organic rice marketing channels in West Sumatra and found that the shortest channel had the lowest marketing margin and the highest farmers' share. These findings indicate that the structure of marketing channels can influence the distribution of economic benefits among marketing participants.

Marketing is an activity that involves the process of moving products from producers to end consumers. This process involves several marketing institutions to perform marketing functions. In the marketing distribution process, various marketing institutions are involved, such as wholesalers, middle-tier traders, and retailers who transfer products from producers to consumers. Under any circumstances, farmers as producers can also sell directly to end consumers based on consumer demand (Assauri, 2011). There are several levels of marketing channel patterns: a zero-level channel (producer directly to consumer); a one-level channel (Producer–Distributor–Consumer); a two-level channel (Producer–Distributor–Retailer–Consumer); and a multi-level channel (Producer–Wholesaler–Distributor–Retailer–Consumer) (Laksana, 2008).

Farmers may reconsider organic farming when the expected economic benefits are insufficient to compensate for the additional requirements and risks associated with organic production. These conditions may include limited access to organic markets, difficulties in obtaining price premiums, certification costs, uncertain demand, and inadequate institutional support.

Heryadi et al. (2018), in their study of former organic rice farmers in East Priangan, West Java, identified several barriers associated with farmers' decisions to return to conventional rice farming. These included economic barriers, certification requirements, organic rice production requirements, institutional constraints, and technical barriers. Their findings indicate that farmers' decisions to discontinue organic farming cannot be explained solely by production-related factors.

More recently, Kartika et al. (2026) examined the resilience of organic rice farming systems in Magelang and Tasikmalaya. Their findings emphasized the importance of institutional arrangements and market risk governance. In particular, farmers' organizations that can manage market relationships, diversify buyers, and share market risks may contribute to the continuity of organic farming. Conversely, dependence on limited buyers and weak institutional capacity may increase farmers' vulnerability when market demand declines.

In this study, farmers' reversion to conventional rice farming is examined in relation to their experiences with organic rice marketing. The analysis focuses on marketing conditions, price incentives, market access, and certification-related issues as factors that may be associated

with farmers' decisions. The relationship is interpreted in the context of farmers' experiences and perceptions rather than as a direct causal effect established by the marketing performance analysis.

The marketing performance of organic rice is an important consideration in determining the economic incentives available to farmers. Marketing channels influence the movement of products and the involvement of marketing institutions, while marketing margins and farmers' share describe how the value of organic rice is distributed between farmers and other market participants. Marketing costs and the distribution of profits provide further information about the efficiency and economic structure of the marketing system.

In addition, certification and market access influence the ability of farmers to differentiate their products and reach consumers who recognize the value of organic rice. When organic products cannot be marketed through appropriate channels or receive prices that reflect their production characteristics, the economic incentives for farmers to continue organic farming may weaken.

Therefore, the shift from organic to conventional rice cultivation needs to be examined by placing marketing as one of the key factors influencing farmers' decisions. Research in Kaligondang District, Purbalingga Regency, is necessary to identify marketing obstacles faced by farmers, analyze the relationship between selling prices, market certainty, distribution channels, and marketing institutions with the decision to switch farming systems, and formulate marketing strategies to enhance the competitiveness of organic rice. The results of the study are expected to serve as a foundation for developing a more effective marketing system, strengthening farmers' bargaining power, and increasing economic incentives so that organic rice cultivation can be sustained over the long term. The objectives of this study are to analyze the market structure and marketing channels of organic rice, evaluate marketing performance in terms of marketing margins and farmer's share, and identify marketing-related conditions associated with farmers' reversion to conventional farming in Purbalingga Regency, Indonesia.

II. Method

This study was conducted in Penolih Village, Kaligondang District, Purbalingga Regency, Central Java, Indonesia. The location was selected purposively because it was a former organic rice production center certified by INOFICE from 2018 to 2020. A census sampling method was employed, involving 41 farmers who had previously practiced organic rice farming and one rice collector. Primary data were collected through structured interviews, direct observation, and documentation, while secondary data were obtained from previous

studies, relevant institutional documents, and Statistics Indonesia (BPS). Data were analyzed using qualitative descriptive and quantitative descriptive methods to identify marketing channels and evaluate market performance. The analysis covered marketing margins, farmer's share, and marketing margin distribution. Marketing margin was calculated as the difference between retail and farm-gate prices, while farmer's share was calculated as the proportion of the farm-gate price to the retail price. Marketing margin distribution was assessed by examining the proportions of marketing costs and profits received by each marketing institution, following Masyrofie, Rahim and Hastuti (2007), and Sudiyono (2002). The data analysis are conducted in this study was based on the research objectives, as follows:

1. Market structure and marketing channels of organic rice in Purbalingga Regency using qualitative descriptive methods
2. Assessment of organic rice market performance in Purbalingga Regency
    a. Marketing Channel Analysis

       The marketing channels of organic rice were analyzed using a qualitative descriptive method to identify the distribution patterns and the marketing institutions involved in delivering the product from producers to final consumers.
    b. Marketing Margin

       Marketing margin was calculated using the following formula (Masyrofie):

       MP=Pr-Pf

       Where:

       MP = Marketing margin (Rp/Kg)

       Pr = Price at the retailer level (Rp/Kg)

       Pf = Price at the producer level (Rp/Kg)
    c. Farmer's share

       The share of the final consumer price received by farmers was calculated using the following formula (Rahim and Hastuti, 2007):

       Sp = Pf/ Pr x 100%

       Where:

       Sp=percentage of the final consumer price received by farmers (%)

       Pf=Price at the farm level (Rp)

       Pr=Price at the final consumer level (Rp)
    d. Marketing margin distribution

       Marketing margin distribution was analyzed to determine the proportion of marketing costs and profits received by each marketing institution involved in the

organic rice Purbalingga regency marketing process. The calculation was based on the following formula (Sudiyono, 2002):

Sbij = [Cij / (Pr-Pf)] x 100%

Meanwhile, the share of profit received by the j marketing institution for performing the i marketing function is calculated as follows: :

Skj= [πj / (Pr-Pf)] x 100% πij = Hjj–Hbj–Cij

Where:

Sbij=Share of marketing costs incurred by the j marketing institution for performing the i marketing function (%)

Cij=Marketing cost incurred by the j marketing institution for performing the i marketing function

Pr= Price at the retailer level

Pf= Price at the farm level

Hjj= Selling price of the j marketing institution

Skj= Share of profit received by the j marketing institution (%)

πj = Profit earned by the j marketing institution

The decision criteria are as follows:

- Marketing performance is considered efficient when the share of profit is Skij > Sbij
- Marketing performance is considered inefficient when the share of profit is Skij < Sbij

e. Marketing Efficency Level

Marketing efficiency was assessed by comparing the total marketing costs with the total value of the organic rice products marketed. The calculation was performed using the following formula (Soekartawi, 1993):

EP_s = (TB/TNP) x 100%

Where:

EPs=Marketing efficiency (%)

TB= Total marketing costs (Rp)

TNP=Total value of the markerted products (Rp)

This formula indicates the marketing efficiency level of each marketing channel based on the costs incurred at every stage of the marketing process. The addition of marketing costs at each marketing institution contributes to the overall marketing efficiency value. A lower proportion of marketing costs relative to the total value of the marketed product indicates a

higher level of marketing efficiency. Therefore, marketing institutions or channels that incur lower marketing costs relative to the value of the products marketed are considered more efficient.

III. RESULTS AND DISCUSSIONS

A. Result

Respondent characteristics shown in Table 1 indicate that the majority of organic rice cultivators in Purbalingga Regency are older farmers. As many as 61% of respondents are aged between 51 and 60 years, while only 10% are under 40 years old. This condition illustrates that rice cultivation activities, including organic-based farming, are still dominated by the older generation, with very limited participation from young farmers. All respondents are male, indicating that the primary role in field-level cultivation activities is still held by men, whereas women likely play more of a role in non-production activities such as processing or marketing agricultural products.

Table 1. Characteristics of Organic Rice Farmer Respondents in Penolih Village

Characteristic	Category/Indicator	Percentage (%)
Age	30-40 years old	10%
	41-50 years old	29%
	51-60 years old	61%
Gender	Male	100%
	Female	0%
Education Level	Elementary School	53%
	Junior High School	20%
	Senior High School	24%
	Higher Education	3%
Land Ownership Status	Self-owned	93%
	Other types of land tenure	7%
Cultivated Land Area	<0.5 hectares	83%
	0.5-1 hectares	15%
	≥ 1 hectares	2%

. In terms of education, the majority of respondents have a basic level of education, namely elementary school graduates (53%) and junior high school graduates (20%), while only 3% have pursued higher education. This indicates that most farmers face limitations in literacy skills, particularly regarding farm management, access to information, and understanding administrative procedures such as applying for credit or organic certification. Low education levels can also serve as a barrier to adopting innovation and implementing sustainable agricultural practices that require more complex technical and administrative

understanding. Meanwhile, from economic and institutional aspects, most farmers own their land (93%), but on a small scale, with 83% cultivating less than 0.5 hectares of land.

Many organic rice farmers in Penolih Village, Kaligondang District, Purbalingga Regency, have begun shifting to conventional rice cultivation. This is driven not only by the expiration of the INOFICE certification in 2021 but also by some farmers becoming reluctant to cultivate rice organically. Organic rice marketing activities in Penolih Village can be identified by examining the number of producers and consumers involved, product entry and exit accessibility, price determination, and the type of goods produced. From these factors, the market structure can be observed, reflecting how business conduct and performance operate within a market or industry (Maulina, 2014).

Based on the research findings, there is no product differentiation at any level from farmers to end consumers. This occurs because the commodity produced is a homogeneous product sold as rice. Price determination relies on agreements established between farmers and collector traders, offered by collector traders to farmers at prices above the standard market rate. This reality indicates that farmers possess relatively low bargaining power in determining the selling price of organic rice. Some farmers sell their organic rice harvest directly to end consumers, while others sell through collectors, who then remarket the product before it reaches final consumers. The number of sellers and buyers affects market formation. Although there are several potential buyers for the farmers' organic rice harvest, this study identifies only a few buyers, specifically collector traders. As buyers, collector traders can be considered market-dominant; however, this does not allow them to set prices arbitrarily, as that would disrupt market equilibrium. The buyers are collector traders who purchase products from farmers for resale, with the product acting as a raw material—namely organic rice.

An imperfectly competitive oligopsony market structure is formed because a small number of buyers dominate the market, both in receiving supply and serving as key purchasers. Under these oligopsonistic conditions, buyers purchase organic rice as a raw product to resell until it reaches the final consumers. Market structure is identified based on several indicators, such as the number of marketing institutions, product differentiation, and the presence or absence of entry and exit barriers for products. Based on these criteria, it can be concluded that the market structure for organic rice in Penolih Village, Kaligondang District, Purbalingga Regency, falls into an imperfectly competitive market—specifically, an oligopsony market structure (Dewi et al., 2021).

A marketing channel pattern is a sequence of product distribution processes involving marketing institutions from farmers to end consumers. Product movement from one location to another generates marketing costs at each involved institution, which ultimately affects the final price paid by consumers (Tamran et al., 2018). Based on the analysis of organic rice marketing channels in Penolih Village, Kaligondang District, Purbalingga Regency, two marketing channels were identified:

- **Zero-Level Channel** Farmer → Consumer In this channel, farmers sell organic rice directly to end consumers without involving intermediary institutions.
- **One-Level Channel** Farmer → Collector → Consumer In this channel, the farmers' harvest is first purchased by collector traders before being distributed to end consumers.

The production process up to harvesting organic rice requires a growing period of approximately three months, similar to conventional rice cultivation. Field harvesting is carried out either independently by farmers or with the help of farm laborers.

The identification of two marketing channels in Penolih Village reflects the different ways in which farmers access consumers and distribute their organic rice products. The first channel allows farmers to sell directly to consumers, while the second involves collector traders who purchase organic rice from farmers and subsequently distribute it to the market. Although the direct channel provides an opportunity for farmers to receive the full consumer purchase price, its implementation may depend on the farmers' ability to establish and maintain their own customer networks. Meanwhile, the involvement of collector traders provides an alternative market outlet, particularly for farmers who have limited access to consumers.

These findings are consistent with the study conducted by Yonida et al. (2023) in Purworejo Regency, which identified several organic rice marketing channels and found that shorter channels generally resulted in lower marketing margins and higher farmer's shares. Their findings demonstrate that the number of marketing institutions involved in product distribution can influence the proportion of the final consumer price received by farmers. A similar pattern can be observed in Penolih Village, where direct marketing provides farmers with a higher gross price share than transactions involving collector traders.

However, the findings also indicate that a shorter marketing channel does not necessarily guarantee better market access for all farmers. Direct marketing requires farmers to undertake additional activities, including finding consumers, maintaining communication, arranging product delivery, and managing transactions. These activities may become

challenging for small-scale farmers who have limited time, resources and access to broader markets. Therefore, the existence of collector traders remains relevant in facilitating product distribution, although the costs and returns associated with their marketing activities need to be evaluated to ensure a more balanced distribution of economic benefits.

Organic rice marketing margin di Penolih Village, Kaligondang District, Purbalingga Regency. Marketing activities involving multiple marketing institutions create a price difference between the price set at the farmer level and the final price received by consumers. This price difference is known as the marketing margin. Thus, the marketing margin represents the difference between the price received by farmers as producers and the price paid by end consumers, occurring across each marketing institution through which the product passes (Pratama & Nuswantara, 2020).

The marketing margin consists of cost components required by each marketing institution to perform its marketing functions. These costs comprise expenses incurred for marketing activities as well as the profit earned by marketing institutions. The details of the marketing margin are presented in the table 2 below.

Marketing Institutions	One Level Channel (Rp/Kg)
Farmer	
a. Farm-gate price	Rp6.802,00
Collector	
a. Rice price	Rp6.802,00
b. Labor cost	Rp659,67
c. Marketing cost	Rp2.663,00
d. Selling price	Rp13.500,00
Marketing margin	Rp6.698,00

Table 2 above illustrates that the institutions involved in organic rice marketing are producers (farmers) and collector traders. Farmers sell rice to collector traders at a price of Rp6,802.00/kg, and collector traders subsequently resell it at Rp13,500.00/kg. It is recorded that the marketing margin for rice organic Penolih Village stands at Rp6,698.00. This marketing margin remains high because the marketing costs incurred by marketing institutions are also relatively high, such as for sorting, packaging, and promotion activities. Besides covering these expenses, the marketing margin also serves to yield optimal profits from organic rice marketing activities (Lisnawati et al., 2017).

The marketing margin of Rp6,698.00/kg identified in the one-level marketing channel indicates a considerable difference between the price received by farmers and the price paid by consumers. The farmer's share of 50.39% further illustrates that farmers receive approximately half of the final consumer price, while the remaining proportion represents

the marketing margin distributed between marketing costs and the collector's profit. This finding suggests that the economis value generated along the marketing chain is not entirely retained by producers.

A comparison with previous research provides further insight into this result. Affandi and Handayani (2020), in their study organic rice marketing in Lampung Province, found that the marketing channel involving farmer groups and retailers achieved the highest farmer's share of 80.95%, with a marketing margin of Rp4,000.00/kg. Similarly, Yonida et al. (2023) reported that the shortest organic rice marketing channel in Purworejo Regency generated the lowest marketing margin and the highest farmer's share. Compared with these findings, the farmer's share recorded in Penolih Village, which reached 50.39% in the intermediary channel, indicates that farmers receive a relatively smaller proportion of the final consumer price than those reported in the most favourable channels in the Lampung study.

Nevertheless, differences in farmer's share should be interpreted by considering the characteristics of each marketing system, including product quality, marketing functions, transaction costs, and the number of institutions involved. A marketing margin does not necessarily represent an excessive profit earned by intermediaries, since it also covers the costs accounted for 49.61% of the total margin, while the estimated marketing profit represented 50.39%. This distribution indicates that both operational expenses and the economic returns of collector traders contribute substantially to the final price formation.

The relatively high propotion of the marketing margin highlights the importance of improving transparency in the distribution of marketing costs and benefits. Farmers need access to information regarding the selling prices at different market levels to evaluate whether the prices offered by collectors adequately reflect the services provided. Strengthening collective marketing arrangements may also create opportunities for farmers to negotiate selling prices and reduce certain marketing expenses through shared transportation, packaging, and product handling. Therefore, improving marketing performance should not be limited to reducing the number of intermediaries but should not be limited to reducing the number of intermediaries but should also focus on improving the distribution of value among marketing.

Marketing margin distribution represents the total costs incurred during marketing and the profit obtained from marketing activities. The calculation of the marketing margin distribution per kg of organic rice in Penolih Village is as follows:

1. Marketing cost

Sbij = [Cij / (Pr-Pf)] x 100%

$$Sbij = \frac{Rp3.322,67}{Rp6.698,00} \times 100\%$$

$$Sbij = 0,49606 \times 100\% = 49,61\%$$

2. Marketing profit margin

Skj= [πj / (Pr-Pf)] x 100%]

$$Skj = \frac{Rp3.375,33,67}{Rp6.698,00} \times 100\%$$

$$Skj = 0,503931 \times 100\% = 50,39\%$$

The results of the marketing margin distribution calculation show that the margin distribution value is 49,61% and the profit share is 50,39%, with $S_{kj} > S_{bij}$, indicating that the marketing margin distribution for organic rice is efficient, albeit by a very narrow margin.

The portion received by farmers, often referred to as the farmer's share, represents the percentage of the final price received by farmers as remuneration for their agricultural production activities. The choice of marketing channel significantly affects the farmer's share, as longer distribution channels result in a smaller share for the farmer. A higher farmer's share indicates a more favorable return for the farmer, which is inversely proportional to the marketing margin. The calculation of the farmer's share received by organic rice farmers is as follows:

$$Farmer's\ share\ (Sp) = \frac{Pf}{Pr} \times 100\%$$

$$Farmer's\ share\ (Sp) = \frac{Rp6.802,00}{Rp13.500,00} \times 100\%$$

$$Farmer's\ share\ (Sp) = 0,503851 \times 100\% = 50,39\%$$

A Farmer's Share of 50.39% means that farmers receive 50.39% of the total retail price paid by end consumers for organic rice. For every purchase made by the consumer, 50.39% of the final selling price goes directly to the farmer as remuneration for their agricultural production efforts. The remaining 49.61% represents the total marketing margin absorbed by intermediaries (such as collector traders) to cover operational costs (sorting, packaging, transportation, promotion) and profit margins. In agricultural economics, a Farmer's Share exceeding 50% ($F_s > 50\%$) indicates a relatively efficient marketing channel, as the producer captures more than half of the final consumer value.

The marketing conditions identified in Penolih Village provide an important perspective for understanding the challenges associated with maintaining organic rice cultivation.

Although organic rice has the potential to generate additional economic value through product differentiation and consumer demand for healthier food, these advantages cannot be fully realised when farmers face limited access to specialised markets. The absence of consistent market recognition may prevent farmers from receiving an appropriate price premium, thereby reducing the economic incentives to continue organic cultivation.

This situation is comparable to the findings of Mardalisa et al. (2023), who examined organic rice marketing in West Sumatra Province. Their study revealed that limited market access resulted in only a small proportion of farmers' organic rice harvest being marketed as organic products, while some of the output was sold at prices similar to conventional rice. This finding highlights the importance of market accessibility in determining whether the added value associated with organic production can be captured by farmers. A similar concern emerges in Penolih Village, where difficulties in maintaining may weaken the distinction between organic and conventional rice in the marketplace.

The expiration of INOFICE certification in 2021 represents an important institutional challenge in this context. Certification provides formal recognition of production practices and helps establish consumer confidence in organic products. Without valid certification, farmers may encounter difficulties in accessing specialised markets that require verified organic status. Consequently, even when farmers continue to apply environmentally friendly cultivation practices, the absence of certification may limit their ability to communicate the product's organic attributes and obtain a corresponding price premium.

The relationship between marketing performance and farmers' decisions to return to conventional cultivation can therefore be understood through the economic incentives associated with each farming system. When organic rice cannot be consistently marketed at a price that compensates for the additional efforts and requirements of organic production, conventional cultivation may become a more practical alternative. Established conventional rice marketing channels may offer greater convenience and more predictable product absorption. Nevertheless, the findings of this study should be interpreted as indicating potential relationships rather than establishing a direct causal effect of marketing performance on farmers' decisions.

These findings suggest that maintaining organic rice production requires more than improvements in cultivation practices. It also requires institutional support for certification, stronger market connections, effective product differentiation, and reliable purchasing arrangements. Without these supporting conditions, the economic advantages expected from organic farming may remain difficult to realise at the farmer level. Consequently, improving

the marketing system should be considered an integral part of efforts to maintain the sustainability of organic rice farming in Penolih Village.

The comparison between the findings of this study and previous research indicates that improving organic rice marketing requires an integrated approach involving farmers, marketing institutions, and supporting organisations. The experiences of organic rice farmers in Lampung, Purworejo, and West Sumatra demonstrate that marketing channel arrangements, market accessibility, and institutional support are important elements in determining the economic benefits received by producers.

For Penolih Village, strengthening farmer groups could be an important starting point for improving marketing performance. Collective marketing arrangements would enable farmers to consolidate production volumes, coordinate product quality, and establish more effective relationships with potential buyers. Such arrangements may also improve farmers' bargaining positions by reducing their dependence on individual transactions with collector traders.

Furthermore, certification continuity and product differentiation need to receive greater attention. Cooperation between farmer groups, local government institutions, agricultural extension workers, and certification bodies could facilitate the renewal of organic certification and improve farmers' understanding of the requirements for maintaining organic production standards. At the marketing level, consistent packaging, product labelling, and traceability could strengthen consumer confidence and improve the recognition of organic rice in the marketplace.

The development of direct marketing should also be encouraged through partnerships with local retailers, specialised organic food outlets, and consumer communities. However, collector traders should not necessarily be excluded from the marketing system, as they may continue to perform important distribution functions. Instead, establishing more transparent pricing arrangements and improving the efficiency of marketing activities would be more appropriate strategies for creating a marketing system that benefits both producers and intermediaries.

Ultimately, the sustainability of organic rice farming in Penolih Village depends on the extent to which production practices are supported by a reliable and economically viable marketing system. Improving farmers' access to markets, strengthening institutional coordination, and ensuring that the economic value of organic production is recognised by consumers are essential steps towards maintaining farmers' participation in organic rice cultivation.

B. Discussion

These findings suggest that marketing constraints may weaken the economic incentives to maintain organic rice production. If conventional rice offers a more accessible or predictable market, farmers may perceive conventional farming as a more practical option. Nevertheless, the withdrawal of certification in 2021 is also an important institutional change. The relative contribution of certification costs, production costs, yields, price premiums, and market demand should be examined before attributing the reversion primarily to marketing performance. Effective organic rice marketing is not simply about shortening the supply chain. It also requires reliable demand, consumer trust, consistent product quality, appropriate pricing, and the ability to distribute products efficiently. For Penolih, the priority is to establish a dependable market before expecting direct marketing alone to sustain organic production.

IV. CONCLUSION

Two organic rice marketing channels operate in the study area: direct sales from farmers to consumers and sales through collectors. The intermediary channel has a reported marketing margin of IDR 6.698/kg and farmer's share of 50,39%, compared with 100% for direct marketing. Limited market access and unequal price distribution are potential constraints on the economic attractiveness of organic rice farming. These constraints may be associated with farmers' decisions to return to conventional farming, although the study does not establish a single causal factor.

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