

The Role of Farmer Groups in Increasing the Income of Tomato Farmers in Padende Village, Central Sulawesi, Indonesia

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ABSTRACT

This study aims to examine the role of farmer groups in increasing the income of tomato farmers before and after joining such groups. The research was conducted using a descriptive method in Padende Village, Marawola District. The findings indicate that the involvement of MBKM students as village facilitators has positively impacted tomato farmers by providing targeted training. This training enabled the farmers to maximize production and sell their tomatoes directly in the primary market. The role of farmer groups in improving income is considered significant, as the tomato farmers in Padende Village are part of a combined farmer group. This group receives support from the village government, particularly in seed assistance. As a result, tomato farmers' income increased notably, reaching IDR 3,500,000 in 2023 from managing 1 hectare of land.

Keywords: Farmer Group, Increasing Tomato Farmer Income.

I. Introduction

Indonesia is a fertile agricultural country, so a significant portion of its population works in farming. Agriculture is the primary livelihood for many Indonesians and is crucial in supporting rapid and stable economic growth. Furthermore, this sector is a key component of the Indonesian government's poverty alleviation strategy (Supu et al., 2022). Agriculture in Indonesia is classified as tropical agriculture, as most of the country's territory lies within the tropics and is influenced by the equator, which nearly divides the nation in half. Indonesia continues to rely heavily on agriculture as a vital sector for population sustenance and a significant source of employment. Although industrialization is no longer the primary focus, agricultural development still requires greater attention, as it has the potential to generate economic surpluses. This occurs when productivity increases, farmers' incomes rise, and they can save and accumulate capital. Improving the standard of living can thus be achieved by enhancing farmers' income (Mawarni et al., 2017).

Tomatoes (*Lycopersicon esculentum* Mill) are horticultural crops that serve as a rich source of vitamins, particularly vitamins A, C, and B. They are high-value agricultural commodities widely cultivated commercially across Indonesia (Wulandari et al., 2014). The presence of farmer groups enables farmers to increase production and improve their overall welfare. The agricultural sector affected by such groups extends beyond tomato farmers alone. Farmer groups are community-based organizations that share a common identity and set of norms, regulating patterns of interaction within the group. These groups function as

platforms for education and learning, helping members enhance their knowledge, skills, and attitudes. Their ultimate goal is to support agricultural self-sufficiency by improving productivity, increasing income, and elevating the quality of life for farmers.

The foundation for forming farmer groups stems from the understanding that individuals cannot independently meet all their needs and expectations. In modern society, people often feel undervalued, overwhelmed, and powerless when attempting to independently fulfill basic needs such as food, shelter, and security. Working within a group is generally more effective and efficient than working alone. A group can thus be defined as individuals who exhibit shared behavior patterns, are interconnected, interact regularly, maintain close relationships, and foster a sense of belonging (Daniel Matanari, in Wiranda and Sari, 2019). The primary purpose of forming farmer groups is to enhance and develop the skills of farmers and their families. These groups serve as a platform for collective learning and empower farmers to take a more active role in agricultural development (Mawarni et al., 2017). The improvement of agricultural activities is reflected in increased productivity, which ultimately leads to higher farmers' incomes and contributes to the welfare of farmers and their families. However, many still believe that farmer organizations do not significantly enhance farmers' income. To strengthen the role and function of farmer groups, their development must be carried out more intensively, with careful planning and effective promotion.

Padende Village is located in the Marawola District of the Sigi Regency. Most residents in this village are engaged in agriculture and are mostly tomato farmers. The land area cultivated by each farmer typically ranges from 0.5 hectares to 1 hectare. This indicates that tomato cultivation can significantly impact sales volume. For instance, tomato sales have shown improvement even without the involvement of external collectors. One of the main challenges tomato farmers face in Padende Village is their continued reliance on selling produce to collectors, which often results in low profit margins. However, with the support of MBKM students who visited the village, farmers have been assisted in marketing their tomatoes directly at the Masomba and Impress markets, helping them achieve better prices and increased income.

II. Literature Review and Hypothesis Development

2.1. The Role of Farmer Groups

The term "role" refers to the main functions or responsibilities carried out during an event or process, whether positive or negative. It can be understood as regulating an individual's behavior and anticipating the actions of others, enabling a person to adjust their behavior accordingly within a group. Roles reflect the expectations others have regarding the type of work an individual performs, and these expectations represent a sense of responsibility attached to a specific role or task. In the context of agriculture, which is the cornerstone of Indonesia's development, the role of all stakeholders involved in the agricultural sector is critical. It must be recognized as a shared responsibility (Azwar, in Mawarni et al., 2017). Farmer groups are organizations that directly engage farmers in developing their agricultural practices. A farmer organization can be defined as an entity that functions effectively and serves as a platform to enhance and expand the activities of its members. In addition to their core agricultural functions, some farmer groups engage in other activities such as cooperation, savings and loans, and providing labor for agricultural tasks (Hermanto, 2007, in Nuryanti et al., 2018). Agriculture is the science that studies how farmers efficiently coordinate the factors of production to maximize their profits. It encompasses land management, cultivation, plant care, harvesting, and livestock farming, all aimed at producing food, feed, fiber, industrial raw materials, and income sources. Agriculture is a vital economic sector in many countries, providing food for the population and raw materials for industry. The development of agricultural science in Indonesia has a long history, shaped by the geographical, cultural, and socioeconomic factors specific to each region (Sinaga et al., 2024).

2.2. Income

In financial terms, income refers to the fixed amount paid as compensation for work or services. In contrast, farmer income is the total revenue farmers earn from their agricultural activities, after deducting all expenses and costs. A higher income indicates that farmers have sufficient capital to invest in and sustain their farming operations, while a lower income suggests reduced investment, which can negatively affect farm productivity (Mawarni et al., 2017). Increasing farmers' income should focus on technical production factors and consider the equally important socio-economic aspects. High material productivity does not necessarily lead to high income. Increased production can only boost farmers' income if they can successfully market their produce and secure a reasonable selling price (Kartasapoetra, 2014, in Dyanto et al., 2022). According to Jaya et al. (2023), the plantation business in the village is managed through a partnership between the village government and the community. This collaboration enables the village to utilize its land effectively, ensuring that the profits from the business benefit the local community.

- **Increase in Community Income**
The income generated from various sources, particularly tomato cultivation, significantly benefits the community.
- **Improvement in Community Development**
This improvement is reflected in the community's ability to educate its children properly. With the increased income, families can access education without being hindered by the cost of school fees.
- **Facilities with Lifetime Ownership**
The business also improves local living standards, enabling people to build homes using the profits from their tomato harvests.
- **Saving for the Future**
This business allows individuals to save for the future, providing financial stability for their families.
- **Environmental Considerations**
Like any business, tomato cultivation has both advantages and disadvantages. A key downside is its impact on the environment. The environment encompasses physical conditions, including natural resources such as soil, water, solar energy, minerals, and flora and fauna in both land and sea. It also includes human-made decisions regarding the use of these resources. A clean environment is crucial for the safety and well-being of the surrounding community.

III. Research Method

The research employed a descriptive approach, which is grounded in the philosophy of post-positivism. This method is used to study the natural state of an object rather than conducting experiments, with the researcher serving as the primary tool. Data collection was carried out using a combination of triangulation techniques. The data analysis was inductive and qualitative, focusing on understanding the meaning behind the findings rather than seeking generalization (Turap et al., 2022). The study was conducted over three months in Padende Village, Marawola District. The primary focus of this research was to identify the role of farmer groups in increasing the income of tomato farmers in Padende Village. The survey method was employed, and data collection was based on interviews and observations.

IV. Results and Discussion

Farmer groups in Padende Village, Marawola District, play a significant role in increasing farmers' income, as farming remains one of the primary occupations of the residents. In Padende Village, the land is divided into groups, and farmers work collectively to cultivate it.

Table 1. Age Distribution of Tomato Farmers in the Grouping

Age (Years)	Gender	
	Men	Women
50	10 people	3people
48	2 people	5people
35	5 people	

Based on Table 1, the study's results indicate that farmer groups significantly enhance productivity. Farmers at productive ages demonstrate optimal conditions for carrying out production activities, which leads to increased output. This suggests that farmer groups are crucial in boosting the income from tomato farming. The role of these groups is to support both the group as a whole and its members in agricultural activities in Padende Village. This is further reflected in the behavior of the group members, who actively interact with each other and possess considerable experience in acquiring production resources.

Table 2. Tomato Farmer Group Income Before Direct Market Sales in 2022

Land Area	Revenue/Quarter			
	January	April	August	December
0,50 m	Rp. 200.000	Rp.100.000	Rp. 250.000	Rp. 500.000
1 Ha	Rp.650.000	Rp.800.000	Rp. 800.000	Rp.900.000

Table 2 shows that the land area in Padende Village ranges from 0.50 square meters to 1 hectare, with 25 workers in the village government's tomato farmer group. This group is part of a larger network of farmer groups in Padende Village, which receives support from the village government, including providing seeds. Currently, the tomatoes harvested in Padende Village are sold to collectors for Rp 900,000 per hectare. In April, however, the harvest from the 0.50 square meter area decreased due to continuous rainfall, which caused crop losses. Despite the challenges, the farmers used available resources, with some opting to rent equipment from other farmers to continue their activities.

Table 3. Income of Tomato Farmer Groups After Selling Directly to the Market in 2023

Land Area	Income		
	September	November	January
0,50 m	Rp. 500.000	Rp.700.000	Rp. 750.000
1 Ha	Rp.1500.000	Rp.2.000.000	Rp. 3.500.000

In 2023, MBKM students will have the opportunity to serve as village facilitators, equipped with the infrastructure to address the challenges faced by the tomato farmer groups in Padende Village. To maximize production, it is essential to provide specialized training for these farmers, focusing on analyzing and understanding the unique conditions of the village. One proposed solution is for the tomato farmers to sell their produce at larger markets, such as Pasar Impres and Masomba, to achieve better yields. As indicated in Table II, in September, a land area of 0.50 hectares was sold at the market, generating an income of IDR 500,000. By selling their tomatoes in the market, farmers experience an increase in their income, demonstrating the positive impact of access to better market opportunities.

V. Conclusion

The study's results were significant, as they demonstrated improvement in farmer income. Farmer organizations effectively utilized the seed aid provided by the village to boost productivity. By selling tomatoes directly to the primary market, bypassing intermediaries, farmers could increase their yields and, consequently, their income. This shift positively impacted the level of sales income for farmers in Padende

Village. Additionally, the increased income from farmer groups has enabled farmers to access better resources, including fertilizers, high-quality seeds, and improved farming techniques.

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