

Enhancing the Role of Cooperatives in Achieving Community Welfare in Tunah Village, Semanding Sub-district, Tuban

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Volume

6

Issue

1

Edition

May

Page

349-355

Year

2025

Article History

Submission: 22-12-2024

Review: 25-03-2025

Accepted: 26-04-2025

Keyword

Cooperatives;
Lontar;
Financial Governance;
Management Governance;
SDGs;

How to cite

Supratiwi, W., Agustia, D.,
Soewarno, N., Isnailita, Iswati, S.,
Tjaraka, H., Kurniawati, I. A.,
Kalanjati, D. S., Satia Utama, A. A.
G., Millati, I. (2025). Enhancing the
Role of Cooperatives in Achieving
Community Welfare in Tunah
Village, Semanding Sub-district,
Tuban. Jurnal Pengabdian
Masyarakat, 6(1), 349-355
<https://doi.org/10.32815/jpm.v6i1.2531>

Abstract

Purpose: This project aims to strengthen the capacity of the Tunah Village community in managing cooperatives and local natural products such as Siwalan, Legen, or Lontar. It addresses the lack of financial and managerial skills, which limits economic development in the region.

Method: Conducted by the Department of Accounting at Airlangga University with PT. Legend Trend, the project involved training sessions in financial accounting, management accounting, and taxation. Data was gathered through observations and pre/post-training assessments.

Practical Application: The program provides practical skills for cooperative management and business planning, supporting job creation and economic growth. It aligns with SDG Goal 1 (No Poverty) and Goal 8 (Decent Work and Economic Growth).

Conclusion: The project has demonstrated that targeted training in financial and management skills can significantly improve the operational effectiveness of rural cooperatives and unlock the economic potential of natural resources such as Siwalan. These findings highlight the importance of integrated community-university-industry partnerships in fostering sustainable rural development and economic resilience.



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Introduction

The Siwalan tree is a type of palm that produces sap. It can survive in critical land conditions, and its ideal habitat is dry and open plains at altitudes of 0–500 meters above sea level (Yuwono, 2023).

The Siwalan tree, also known as the Lontar tree (*Borassus flabellifer*), is a type of palm that grows in Southeast and South Asia (Supriatiningrum et al., 2021). Siwalan is the fruit of the lontar plant and contains carbohydrates in the form of sucrose and glucose, with very low protein and fat content (below 1%), and a moderate amount of fiber (Lekhuleni et al., 2024; Meena et al., 2023). The flesh of the Siwalan fruit has a high crude fiber content, approximately 25 grams per 100 grams (Yuwono, 2023).

The Siwalan tree offers many benefits and uses—from its leaves, trunk, and fruit to its flowers, which can be tapped for fresh sap (known as legen or nira), fermented into palm wine (tuak), or processed into Siwalan sugar (a type of palm sugar) (Rohalida et al., 2022; Schwarz & Bauhus, 2019). The lontar fruit grows in clusters of about 20 per bunch, and each fruit contains 3–7 pulp segments covered by a thick, hard shell (Dewi & Yanuarto, 2024).

Given its abundant potential and benefits, the Siwalan tree holds great promise for innovation and development. Such innovation requires collaboration among various stakeholders, including local communities, businesses, and universities. Innovation plays a key role in addressing environmental challenges marked by uncertainty, complexity, and ambiguity, and is essential for achieving sustainable development (Zhu et al., 2024).

Training and capacity building serve as valuable methods to develop skills and ideas within the community. Tunah Village, located in the Semanding sub-district of Tuban Regency, is rich in natural resources, particularly the Siwalan plant. On average, villagers in Tunah can produce 50–100 liters of sap per person per day, with the minimum output being 5–10 liters of legen daily (Dewi et al., 2023). This demonstrates the abundance of natural resources (SDA) available in Tunah Village.

With the majority of its residents working as Siwalan farmers and producing abundant harvests, Tunah Village requires training and knowledge-building efforts to better harness its existing potential—from both human resources (SDM) and natural resources (SDA). By equipping the Tunah community with relevant knowledge and competencies, the goal is to enhance sustainable capacity and improve the community's economic quality (Modjo, 2024).

The economy plays a vital role in individuals' lives (Modjo, 2024). The people of Tunah Village are striving to improve their economic capacity by forming a cooperative. The established cooperative in Tunah Village holds valuable business potential and should ideally become a key player in driving the local economy. With the village's rich natural resource—Siwalan or Lontar—the community has created a business entity in the form of a cooperative. Supported by PT Legend Tren, which is ready to accommodate the Lontar yields from the villagers, it is hoped that the Tunah community, through its cooperative, can seize this opportunity by managing the Lontar products effectively. However, in reality, the utilization of Lontar resources through the cooperative remains suboptimal, highlighting a gap between existing potential and its actual implementation.

In the broader context of cooperative development, two additional critical factors are the optimization of fund usage and institutional management (Arifandy et al., 2020). These are crucial for enhancing community welfare. However, in many areas with abundant natural resources, such potential often remains underutilized in supporting local economic development and improving welfare (Siyamsih, 2024). Tunah Village, for instance, possesses an abundance of Lontar trees, yet their use has not been optimized.

Referring to this issue, to meet Sustainable Development Goals (SDGs) point 1 (ending poverty) and point 8 (promoting decent work and economic growth), with a focus on equal access to economic resources and creating decent employment opportunities, the main challenges faced by the Tunah Village cooperative are the lack of financial management and

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the underutilization of existing Lontar-based resources. Additionally, a limited understanding of risk management and effective cash flow management are issues that need to be addressed.

In collaboration with partners Yatim Mandiri and PT Legend Tren, the Department of Accounting, Faculty of Economics and Business, Airlangga University will carry out a community service program in Tunah Village, Semanding Sub-district, Tuban Regency.

The target group of this program is Siwalan farmers who are also cooperative members. This group was chosen to develop their understanding and skills in good cooperative governance, especially in financial management, with the expectation that they will share their knowledge with the wider village community.

Method

This community service program is designed to provide knowledge, insights, and skills to the local community, particularly the cooperative managers in Tunah Village and the management team of Legend Tren in Tuban, with the goal of fostering effective financial and managerial governance. It also aims to help develop and optimize the existing potential of the village, thereby empowering the community economically. The program was conducted in person (offline) in Tunah Village, Tuban, under the theme “Enhancing the Role of Cooperatives in Realizing the Welfare of the Tunah Village Community, Tuban.”

The program began with a preparation phase, which included coordinating with the Tunah Village cooperative and Legend Tren management to align on the community service theme. A survey and problem analysis were conducted to identify issues faced by the cooperative, which revealed a strong need for knowledge in financial and managerial practices to unlock opportunities such as funding support from both governmental and private institutions. Coordination was also carried out with key partners, including Yatim Mandiri and Legend Tren, to define the target participants, select speakers, determine technical details, and survey the location for the program. Necessary permissions for the venue were also secured during this stage.

Figure 1. Initial survey related to problem analysis



The implementation phase took place on October 22, 2024, and was attended by 25 representatives from the cooperative and Legend Tren management. On the first day, three key topics were covered: Financial Accounting, Management Accounting, and Taxation. The sessions were led by experts from Universitas Airlangga, including Dr. Devi Sulistyo Kalanjati, SE., M.Acc., M.Sc., Ika Atma Kurniawati, SE., M.Si., Ak., and Dr. Heru Tjaraka, SE., M.Si., Ak.

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Figure 2. Material presentation session



Following the program, a follow-up phase was conducted to evaluate the quality of the materials delivered, using pre-tests and post-tests to assess the participants' knowledge and understanding. Partner contributions were made in-kind, not in cash, and included active collaboration from the beginning, such as coordinating participant involvement and even serving as one of the speakers.

Figure 3. Pre-test and post-test session



An additional follow-up evaluation was carried out on November 19, 2024. The purpose of this session was to provide mentoring and ensure that the cooperative members had begun applying the knowledge and training they had received.

Figure 4. Follow-up evaluation session



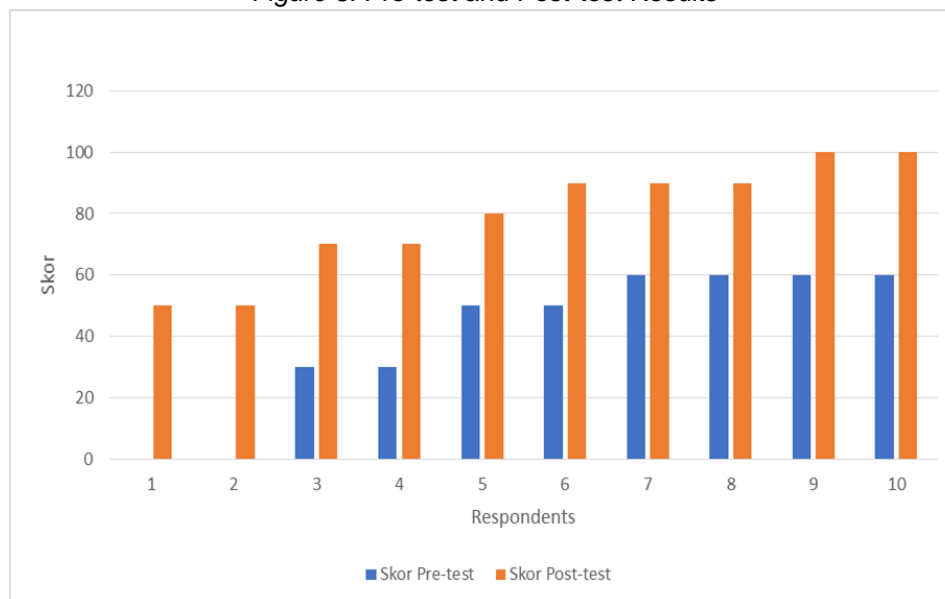
Result

The community service program on enhancing the role of cooperatives in improving the welfare of the people in Tunah Village, Semanding District, Tuban Regency, was carried out by providing three key topics: basic financial accounting, management accounting, and taxation. The basic financial accounting session explained how to create and organize

accounts, prepare an opening balance sheet, and compile financial statements including the income statement. The management accounting session covered how to prepare financial reports, identify production cost components, and explore potential innovations. The final session focused on taxation, introducing the concept of taxes and the various types of taxes.

The outcomes of these sessions were evaluated through pre-tests and post-tests to assess the level of knowledge and understanding gained by the farmers, who are also cooperative members. Based on the results shown below:

Figure 5. Pre-test and Post-test Results



The figure illustrates a noticeable improvement in understanding among the participants. Most participants showed a lack of knowledge at the beginning, but after the training, nearly all demonstrated comprehension of basic financial accounting, management accounting, and taxation—essential areas in cooperative management.

In addition to improving cooperative members' knowledge and skills, this community service initiative directly supports two critical Sustainable Development Goals (SDGs): SDG 1 (End Poverty) and SDG 8 (Decent Work and Economic Growth). By providing training on financial governance, the program contributes to creating decent work opportunities for Siwalan farmers, enabling them to go beyond farming by actively managing and adding value through cooperation. Furthermore, farmers learned how to enhance the value of Siwalan crops—initially limited to sap and fruit—by developing products such as palm sugar and jelly. This value addition can significantly boost farmers' income and contribute to economic growth, ultimately helping lift the community of Tunah Village out of poverty.

Discussion

The implementation of the community service program in Tunah Village reflects the importance of empowering rural communities through financial literacy and cooperative management training. The program addressed a critical need by focusing on three main areas—basic financial accounting, management accounting, and taxation—which are foundational to the effective operation of any cooperative.

The significant increase in participants' understanding, as evidenced by the results of the pre-test and post-test assessments, suggests that the educational materials and delivery methods were both relevant and accessible. Many participants initially lacked familiarity with basic financial concepts; however, post-training evaluations showed that most had gained a solid understanding of how to prepare financial reports, manage production costs, and comply

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with tax regulations. This newly acquired knowledge equips cooperative members to make more informed decisions, contributing to better financial governance and long-term sustainability.

From a broader perspective, the program's outcomes demonstrate alignment with Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty) and SDG 8 (Decent Work and Economic Growth). By training farmers not only to manage their cooperatives but also to explore value-added innovations using Siwalan (Lontar) resources, the initiative opens avenues for income diversification. This transformation—from raw product extraction to processed goods such as palm sugar and jelly—enables the community to move up the value chain and reduce dependence on low-margin products.

Moreover, the collaboration between academia (Universitas Airlangga), private partners (Legend Tren), and local stakeholders illustrates a successful model of a multi-stakeholder approach in community empowerment. This synergy allowed for context-specific solutions and fostered a sense of ownership among participants. The program also showed how capacity building at the grassroots level can be instrumental in bridging the gap between potential and practice, especially in rural settings with untapped natural resources.

Nevertheless, sustainability remains a key challenge. Continued mentoring, follow-up evaluation, and integration of digital tools for cooperative management could help institutionalize the knowledge shared and ensure that the progress achieved is maintained over time. Future efforts should also consider expanding the scope of training to include product marketing, digital financial tools, and access to broader markets to fully unlock the economic potential of Siwalan products.

Conclusion

Overall, the financial governance training has been carried out according to the targets, objectives, and expectations. The farmers, who are also cooperative members, have understood the material provided. Almost all participants experienced an improvement in their level of understanding. However, there are some challenges that need to be addressed, particularly regarding the succession of cooperative members, as most of the current members are approaching non-productive age. Therefore, it is essential to ensure the continuity of human resources in the future.

Acknowledgements

We would like to express our sincere gratitude to all those who contributed to the success of this community service program. Our heartfelt thanks go to the cooperative management of Tunah Village, Legend Tren, and Yatim Mandiri for their invaluable support and collaboration. We also extend our appreciation to the speakers from Universitas Airlangga, whose expertise in financial accounting, management accounting, and taxation greatly enhanced the training. Finally, we would like to thank the residents of Tunah Village for their active participation and commitment to improving their community's welfare.

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