

Advancing Sustainable Tourism MSMEs through Financial Management Assistance: Community Service for Lohloh Cemcem Producers in Penglipuran Village, Bali

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Abstract.

Penglipuran Village in Bali is widely recognized as a community-based tourism village that integrates cultural preservation, local governance, and household-level economic participation. As tourism activities expand, local micro, small, and medium enterprises (MSMEs) become important actors in creating visitor experiences and supporting inclusive local economic growth. This community service activity aimed to strengthen the financial management capacity of Lohloh Cemcem producers, a traditional local beverage enterprise in Penglipuran Village. The program was implemented as part of the Sustainable International Community Service (SICS) 2 Bali 2026 through field observation, semi-structured interviews, participatory discussion, documentation, and a simple cost-of-production simulation. The findings indicate that the Lohloh Cemcem MSME has strong cultural and tourism value, yet still faces challenges in recording production costs, separating household and business cash, calculating labor and overhead costs, responding to raw material price fluctuation, and negotiating margins across producer-reseller-trader distribution chains. The assistance introduced a practical financial management framework covering cost classification, cost of goods produced, unit cost calculation, selling-price formulation, daily cash recording, and follow-up mentoring. This program contributes to SDG 4, SDG 8, SDG 11, SDG 12, and SDG 17 by linking accounting knowledge, sustainable tourism, community empowerment, responsible production, and international academic collaboration.

Keywords: *Financial Management; Lohloh Cemcem; Msme's; Penglipuran Village; Sdgs; Sustainable Tourism.*

I. INTRODUCTION

Community service in higher education plays a strategic role in connecting academic knowledge with practical community needs. In the context of sustainable development, universities are expected not only to produce research and graduates but also to contribute to local empowerment, social innovation, and collaborative problem solving. The Sustainable International Community Service (SICS) 2 Bali 2026 provided such a platform by bringing together universities, international partners, government, industry, students, and local communities to advance Sustainable Development Goals (SDGs) through community empowerment. The program was held on 29 June-2 July 2026 and involved participants from Indonesia and several international partner countries (Universitas Negeri Jakarta, 2026).

One of the target locations of the program was Penglipuran Village, Bali. Penglipuran is known for its cultural landscape, traditional architecture, village-based governance, and strong commitment to preserving local identity. The development of tourism in the village has encouraged a transformation in residents' economic activities. Residents increasingly participate in culinary businesses, souvenir production, and other tourism-supporting enterprises. This change shows that community-based tourism can provide local economic opportunities when supported by governance, social participation, and responsible business practices.

The Accounting Cluster of the Faculty of Economics and Business, Universitas Negeri Jakarta, consisting of the undergraduate, master's, and doctoral accounting programs, participated in this international community service activity. From an accounting perspective, MSME development requires more than product innovation and marketing. It also requires basic financial management skills, cost recording, pricing accuracy, cash separation, and business decision-making based on reliable information. Financial literacy and business records are essential for MSMEs because they help business actors understand real profits, manage working capital, and plan sustainable growth (Lusardi, 2019; Tambunan, 2019).

The local enterprise observed in this activity was the Lohloh Cemcem MSME. Lohloh Cemcem is a traditional beverage associated with local taste, cultural identity, and visitor experience in Penglipuran. Despite its strong tourism potential, field discussions indicated that producers still faced difficulties in calculating production costs completely. Selling prices tended to be influenced by long-standing market habits and distribution pressures, while several costs such as labor, electricity, water, packaging, transportation, equipment use, and depreciation were not always incorporated into the calculation. This condition can reduce the accuracy of selling-price decisions and weaken the bargaining position of producers within the tourism value chain.

This article describes the implementation and results of a community service activity that focused on financial management assistance for Lohloh Cemcem MSME actors in Penglipuran Village. The article specifically discusses the village governance context, the MSME business model, the identified financial management problems, and the practical assistance framework formulated during the activity. The program is expected to serve as a small but relevant model of how accounting knowledge can support sustainable tourism MSMEs and SDG-oriented community empowerment.

II. METHODS

2.1 Location, time, and subject of community service

The community service activity was carried out in Penglipuran Village, Bali, on 30 June 2026, as part of the SICS 2 Bali 2026 program. The main subject of the activity was the Lohloh Cemcem MSME, a local beverage enterprise connected to the tourism experience of Penglipuran Village. The activity involved interaction with village representatives, local MSME actors, and the accounting academic delegation from Universitas Negeri Jakarta. The local governance context was introduced by village representatives, who explained that community decision-making in Penglipuran takes place in a village that consists of approximately 280 households.

2.2 Community service design

The activity used a participatory and contextual community service design. The approach combined direct field observation, semi-structured interviews, group discussion, and simple financial management simulation. The participatory approach was selected because the purpose of the activity was not only to collect information but also to build mutual understanding between facilitators and MSME actors, identify practical problems, and formulate solutions that could be applied by local business actors. Participatory rural appraisal emphasizes the importance of learning directly from community actors and recognizing local knowledge as the basis for intervention design (Chambers, 1994).

The service team observed the production environment, product preparation, packaging activities, and the use of production tools. The team also discussed the business process with MSME actors, including raw material procurement, production volume, labor involvement, packaging, pricing, reseller relationships, and challenges caused by seasonal changes in raw materials. This diagnostic stage was followed by the formulation of a simple cost-of-production and price-setting framework.

2.3 Data collection and analysis method

Primary data were collected through field notes, photo and video documentation, direct observation, and semi-structured discussions with village representatives and MSME actors. The data were qualitative and were analyzed thematically. The analysis focused on recurring themes, including village governance, tourism-based MSME development, cost components, price-setting practices, distribution relationships, and financial management needs. Thematic analysis was used because it enables researchers and facilitators to identify meaningful patterns from qualitative field data (Nowell et al., 2017).

To improve the validity of the findings, the service team triangulated information from direct observation, documentation, and dialogue. The financial management analysis used a simple MSME accounting framework that classifies costs into direct materials, direct labor, packaging, operating overhead, distribution, and depreciation. The framework was then linked to the formulation of cost of goods produced, unit cost, and selling price.

III. RESULT AND DISCUSSION

3.1 Penglipuran Village governance and sustainable tourism context

Desa Adat Penglipuran carries out the governance of Penglipuran Village as an autonomous customary institution. The customary governance system regulates community life, cultural preservation, tourism management, and local economic activities through collective rules and

community-based decision-making. This governance structure enables Penglipuran to maintain its cultural identity while developing tourism and MSMEs as part of a sustainable village economy.

Tourism development has encouraged economic transformation in Penglipuran. Residents who were previously more concentrated in traditional occupations now increasingly participate in tourism-related MSMEs, including culinary products, souvenirs, and services that support visitor experiences. This condition supports the idea that sustainable tourism should strengthen local communities rather than replace their cultural identity. The SICS 2 Bali 2026 program itself emphasized the importance of community empowerment, local potential, MSMEs, and sustainable tourism practices as part of SDG implementation (Universitas Negeri Jakarta, 2026).

The village representative also emphasized that Penglipuran continues to innovate without abandoning its identity as a customary village that maintains cultural traditions. This principle is relevant to MSME development because local products must be improved in terms of management and competitiveness while still preserving authenticity. Therefore, financial management assistance should be positioned not merely as a technical accounting intervention but also as part of a broader effort to sustain local culture, tourism quality, and inclusive economic growth.



Figure 1. Accounting Cluster of FEB UNJ during the International Community Service activity at Penglipuran Village, Bali.

3.2 Profile of Lohloh Cemcem MSME and tourism value

Lohloh Cemcem is a local beverage product that carries both economic and cultural value. In the tourism context, the product is not only sold as a drink but also as part of the visitor experience in Penglipuran Village. Tourists are attracted not only by visual beauty but also by authentic local

products, stories, tastes, and community interaction. Therefore, Lohloh Cemcem has the potential to become a cultural product that strengthens the village's tourism identity.

The production process discussed during the activity involved the use of local raw materials such as cemcem leaves and other supporting ingredients, including sugar, salt, tamarind, chili, water, and other flavoring components depending on the production recipe. The production process also uses equipment such as blenders, containers, strainers, bottles, caps, and labels. The product is distributed through local sales channels and resellers. The discussion indicated that selling prices may differ between producers, resellers, and final sellers. For example, field discussion illustrated a price chain in which the producer price, reseller price, and final market price differed across distribution levels.

The business has a strong opportunity because it is connected to a well-known tourist village. However, tourism potential alone is not sufficient to ensure sustainability. MSME actors also need to understand cost structure, profitability, cash flow, and price negotiation. Without these capabilities, producers may continue producing and selling, but may not accurately know whether the business generates sufficient profit after all costs are considered.

3.3 Financial management challenges identified

Several financial management challenges were identified during the discussion. First, the selling price was not always based on a comprehensive cost calculation. The price was influenced by existing market habits and distribution pressures. If the price has remained unchanged for several years while input prices increase, the producer's margin may gradually decline. This risk becomes more important when raw material prices fluctuate due to seasonal availability.

Second, cost calculation tended to focus on visible raw materials. Business actors were aware of ingredients such as leaves, sugar, salt, tamarind, chili, and water, yet several indirect costs were not always included. These indirect costs include electricity, water, labor, transportation, packaging, tool maintenance, and depreciation. Third, family or community labor was not consistently treated as a production cost. In the observed production context, several people may be involved in filling, closing, and preparing bottles for two to three hours. Even when labor comes from family or neighbors, its economic value should be recognized to determine real profit.

Fourth, the producer faces bargaining pressure in distribution. Resellers and traders also need margins and may be sensitive to price increases. Therefore, price-setting must balance producer cost recovery, reseller margin, final consumer acceptance, and the competitiveness of tourism products. Fifth, systematic daily records were still limited. Business actors may know the cash received from sales, but do not always record all expenses and production quantities. This condition makes it difficult to calculate unit cost and evaluate profit per production batch.

Table 1. Financial management issues and assistance framework for Lohloh Cemcem MSME.

Issue identified	Practical implication	Assistance provided
Incomplete production cost calculation	The selling price may not cover all business costs.	Introduce cost classification and the cost of goods produced calculation.

Labor cost is not consistently recorded	Actual profit may be overstated.	Record labor hours and assign a reasonable labor cost per batch.
Electricity, water, and equipment use are not included	Overhead and depreciation are hidden.	Add operating overhead and depreciation components to unit cost.
Seasonal raw material price fluctuation	Margin declines when input prices rise.	Create a raw material price log and update the selling price periodically.
Weak separation of household and business cash	Business performance is difficult to evaluate.	Use a simple cash book and separate business cash from household spending.
Distribution pressure from resellers and traders	The producer's bargaining position may weaken.	Use cost-based price negotiation and transparent margin discussion.

3.4 Financial management assistance and cost-of-production framework

The assistance emphasized that Lohloh Cemcem producers need a practical and easy-to-use financial recording system. The first step is separating business cash from household cash. This separation helps business actors identify whether the enterprise generates positive cash flow and whether profit is being reinvested or absorbed by daily household needs. The second step is recording every production batch. Each batch record should include date, quantity produced, raw material cost, packaging cost, labor cost, electricity and water cost, transportation, and other costs.

The third step is calculating the cost of goods produced. The simple formula introduced was: total production cost divided by the number of bottles produced. After the unit cost is known, the producer can determine the selling price by adding a reasonable margin. This approach is important because it prevents prices from being determined solely by market habits or pressure from resellers. Price negotiation becomes stronger when producers can show the cost structure clearly.

The fourth step is monitoring raw material prices. Cemcem leaves and other ingredients may vary in availability and price across seasons. A simple price log can help MSME actors compare costs between normal and scarce periods. If input costs increase, business actors may adjust selling prices, packaging sizes, production volume, or reseller margins. The fifth step is adopting simple digital tools. Smartphone-based cash book applications or spreadsheet templates can help MSME actors record purchases, sales, and production quantities without requiring complex accounting knowledge.

3.5 Strategic empowerment needs for sustainable MSME development

The assistance formulation shows that sustainable MSME development requires integration between financial literacy, product identity, and community governance. Financial literacy is needed to calculate costs and profits. Product identity is needed to maintain the cultural value and authenticity of Lohloh Cemcem. Community governance is needed to ensure that tourism and MSME development remain aligned with local rules and shared benefits.

Based on the field discussion, several follow-up strategies can be proposed. First, the village and MSME actors can develop a standard operating procedure for production, hygiene, taste consistency, packaging, and storage. Second, the producer group can formulate a cost-based reference price to guide negotiation with resellers and traders. Third, the accounting team can provide follow-up mentoring using a one-page financial recording template. Fourth, product storytelling can be strengthened so that Lohloh Cemcem is marketed not only as a beverage but also as a cultural experience from Penglipuran. Fifth, collaboration among universities, village institutions, government, and tourism stakeholders should continue to support innovation, training, and market access.

These strategies are consistent with the broader concept of sustainable tourism and community empowerment. The tourism product should create economic value while preserving local culture and distributing benefits to local residents. The involvement of universities can help transform local problems into learning, research, and service opportunities. Meanwhile, international collaboration can broaden perspectives and strengthen the contribution of community service to SDGs.

3.6 Contribution to SDGs

This community service activity contributes to several SDGs. It supports SDG 4 by providing practical learning and capacity building for MSME actors and academic participants. It supports SDG 8 by strengthening local entrepreneurship, decent work opportunities, and community-based economic growth. It supports SDG 11 by preserving local culture and strengthening sustainable village tourism. It supports SDG 12 by encouraging responsible production practices through cost awareness, efficient resource use, and quality consistency. It also supports SDG 17 by promoting collaboration among universities, village communities, government, industry, and international partners.

The main added value of this activity lies in the application of accounting knowledge to a real community context. Cost calculation and financial recording are often perceived as technical issues, but in MSME empowerment, they influence fairness, sustainability, bargaining position, and local welfare. Therefore, financial management assistance can be seen as a practical pathway to strengthen sustainable tourism MSMEs.

IV. CONCLUSION

The community service activity in Penglipuran Village demonstrated that the Lohloh Cemcem MSME has strong potential as a cultural and tourism-based local enterprise. The product represents local identity and supports the visitor experience in Penglipuran. However, the business still faces financial management challenges, including incomplete cost calculation, limited daily recording, unclear separation between business and household cash, insufficient recognition of labor and overhead costs, raw material price fluctuation, and bargaining pressure across distribution channels.

The assistance provided by the Accounting Cluster of FEB UNJ introduced a practical framework for financial management. The framework includes cost classification, production batch recording, cost of goods produced calculation, selling-price formulation, raw material price monitoring, and simple cash book practices. These tools can help MSME actors understand real profits, negotiate prices more confidently, and plan business sustainability.

The program also highlights the importance of integrating accounting, sustainable tourism, local governance, and cultural preservation. Strengthening financial management should not reduce the cultural value of Lohloh Cemcem; instead, it should support the continuity of local products and improve community welfare. Future community service programs should provide follow-up mentoring, develop standardized recording templates, and evaluate the impact of financial management assistance on profit, pricing decisions, and MSME resilience.

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