

Assistance in Production Cost Management for Weavers

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Abstract: This community engagement program aims to enhance the financial management capabilities of weaving artisans in Kampung Tenun Rongkong, Luwu Utara, by strengthening their understanding and application of production cost management. Traditional weavers generally rely on intuitive methods when determining production expenses and pricing, which results in inaccurate cost estimates, inconsistent pricing strategies, and limited financial sustainability. To address this gap, a participatory and problem-based approach was implemented through several stages, including preliminary assessment, training workshops, hands-on mentoring, and evaluation. The program introduced key concepts related to cost classification, cost of goods manufactured (COGM), cost of goods sold (COGS), budgeting techniques, and simple financial record-keeping tailored to small-scale weaving enterprises. The results indicate significant improvements in artisans' knowledge of production cost components, accuracy in cost calculation, and their ability to record daily expenditures using structured worksheets. Participants also demonstrated increased awareness of overhead costs and adopted more rational pricing strategies based on actual cost data. Mentoring activities further facilitated behavioral changes, particularly in tracking expenses and exploring more efficient raw material procurement options. Despite these positive outcomes, challenges related to varying literacy levels and limited digital readiness remain. The program highlights the importance of continuous assistance and the integration of broader capacity-building topics, such as digital marketing and market access, to ensure long-term sustainability for traditional weaving communities.

Keywords : Production Costs, Weaving Artisans, Cost Management, Financial Literacy, Community Engagement.

1. Introduction

Handwoven textile production represents one of the most culturally significant and economically valuable forms of traditional craftsmanship in Indonesia. The weaving tradition has been preserved for centuries and remains deeply rooted in the social, cultural, and historical identity of various local communities. In regions such as South Sulawesi, weaving is not merely an economic activity but also a symbolic expression of local wisdom, cultural continuity, and community pride. The intricate motifs, color patterns, and weaving techniques used by traditional artisans are often reflections of historical narratives, mythological stories, and philosophical values passed down across generations. Because of this, woven textiles are valued not only for their functional use but also for their cultural and aesthetic dimensions (Sahriah et al., 1991).

Despite the cultural richness and economic potential of the weaving sector, many traditional weaving artisans continue to face fundamental challenges in managing production costs, maintaining efficiency, and optimizing the use of resources. These challenges are often linked to limited knowledge of financial management, unstable access to raw materials, and fluctuating market demand. As competition intensifies—both from mass-produced textiles and imported products—traditional weavers must be able to position their products competitively. One of the key determinants of competitiveness is the ability to manage production costs effectively. Efficient cost management enables artisans to determine accurate selling prices, predict profitability, and maintain cash flow stability, which are essential for sustaining small-scale creative enterprises in today's market environment.

Production cost management is a critical component of small business sustainability, particularly in the creative industry sector. Production costs typically include raw materials, labor, overhead, and other operational expenses that directly influence the pricing strategy and profitability of artisans (Mulyadi, 2012). For weaving artisans, the largest cost components often come from the procurement of raw materials such as thread, dyes, and complementary weaving tools. Many artisans purchase raw

materials individually at retail prices, resulting in high overhead costs that reduce potential profit margins. Inadequate planning, inconsistent monitoring of production expenses, and the absence of standardized cost calculation mechanisms further exacerbate inefficiencies.

In many rural weaving communities, artisans rely heavily on traditional knowledge and inherited weaving techniques but may lack formal exposure to modern financial literacy and cost management principles. As a result, decisions related to pricing, sourcing, and production planning are often based on intuition rather than structured analysis. This leads to problems such as inaccurate cost estimation, underpriced or overpriced products, irregular cash flow, and difficulty meeting market demands. Research by Ramli (2019), for example, highlights how production costs significantly influence the income levels of weaving artisans, particularly in regions where access to raw materials and production facilities is limited.

Moreover, the weaving sector plays an important socio-economic role, especially in supporting rural livelihoods and empowering women. In many weaving communities, women serve as the primary producers of woven textiles, while simultaneously fulfilling domestic responsibilities. The weaving industry thus contributes not only to household income but also to the preservation of cultural heritage and the empowerment of women artisans. Supporting these artisans through structured community development programs—or community service initiatives—has the potential to create long-term economic and social benefits.

Given these challenges and opportunities, community service programs aimed at strengthening production cost management for weaving artisans are crucial. Such programs may include training on cost classification, calculation of cost of goods sold (COGS), budgeting strategies, and techniques for optimizing resource allocation. They may also involve practical interventions such as group purchasing systems, diversification of woven products, and improved production scheduling to enhance operational efficiency. Programs of this nature are aligned with the broader objectives of sustainable economic development and the preservation of cultural industries.

The present community service initiative focuses specifically on weaving artisans in **Kampung Tenun Rongkong**, located in **Dusun Salurante, Desa Rinding Allo, Luwu Utara, South Sulawesi**. Rongkong weaving is a well-known cultural asset of South Sulawesi, featuring distinct motifs and artistic characteristics. However, many weavers in this region face increasing economic pressures due to rising raw material prices, limited market access, and the absence of standardized cost management practices. Consequently, they experience challenges in setting competitive prices and maximizing profits.

To address these gaps, the community service team from **Universitas Mega Buana Palopo** implemented a structured mentoring program focusing on the analysis, calculation, and control of production costs. This program is expected to help artisans improve their production planning, operate more efficiently, and enhance the economic sustainability of their weaving enterprises. The program also aims to strengthen artisans' understanding of basic accounting concepts, financial literacy, and simple record-keeping mechanisms that can support decision-making. Similar initiatives have demonstrated positive outcomes in empowering micro and small enterprises by enhancing their managerial capabilities and financial competencies (Ramli et al., 2023; Ramli et al., 2024).

Furthermore, the rapid development of digital platforms and online marketplaces has opened new opportunities for weaving artisans to expand their reach. However, without a solid foundation in production cost management, artisans may struggle to maintain competitive pricing while ensuring product quality. This highlights the necessity for continuous capacity-building programs to equip artisans with the tools needed to navigate modern business environments.

A structured and systematic approach to cost management is also essential to ensure the long-term sustainability of cultural industries. The preservation of traditional crafts depends not only on

cultural values but also on the artisans' ability to maintain economically viable businesses in a competitive marketplace. Community service programs, such as the present initiative, serve as important catalysts for building this capacity and ensuring that traditional weaving remains a sustainable livelihood for future generations.

In summary, effective production cost management is crucial for improving the economic well-being of weaving artisans, preserving cultural heritage, and enhancing competitiveness in the creative industry. This introduction underscores the cultural significance of weaving, identifies the challenges faced by artisans, and highlights the strategic importance of cost management. The mentoring program implemented in Kampung Tenun Rongkong is expected to generate practical contributions to artisan empowerment and sustainable economic development at the community level.

2. Methods of Implementing Community Service

The implementation of this community service program employed a participatory, structured, and problem-based approach designed to address the specific needs of weaving artisans in Kampung Tenun Rongkong, Dusun Salurante, Desa Rinding Allo, Luwu Utara. The method consisted of several stages, including preliminary assessment, program planning, capacity-building activities, hands-on mentoring, and evaluation. Each stage was executed to ensure that the interventions were contextually relevant, sustainable, and aligned with the economic characteristics of local weaving practices.

2.1 Preliminary Assessment and Needs Identification

The program began with a preliminary assessment aimed at understanding the socio-economic conditions, production processes, and financial management practices of the artisans. Data were collected through direct observation, informal interviews, and focus group discussions (FGDs) with community leaders and artisan groups. This assessment allowed the team to identify key challenges such as lack of standardized cost calculations, absence of financial record-keeping, fluctuating raw material prices, and inefficiencies in production planning. Findings from this stage served as the foundation for designing a targeted intervention tailored to the artisans' capacity and business scale.

2.2 Program Planning and Material Development

Based on the initial assessment, the program team developed modules consisting of three main components:

- (1) **Basic concepts of production cost classification**, including raw material cost, labor cost, and overhead cost;
- (2) **Techniques for calculating cost of goods manufactured (COGM) and cost of goods sold (COGS);** and
- (3) **Simple financial recording and budgeting methods** suitable for small weaving enterprises.

The learning materials were adapted to a non-formal education setting using simplified language, visual diagrams, and step-by-step worksheets to ensure accessibility for participants with varying levels of educational background.

2.3 Socialization and Community Engagement

Prior to implementation, a socialization meeting was held to introduce the program objectives, schedule, and expected outcomes to community members. The team coordinated with local leaders and weaving groups to ensure full participation and logistical readiness. This engagement phase was

essential for building trust, promoting community ownership, and encouraging active involvement throughout the program.

2.4 Training and Workshop Activities

The core activities of the program involved a series of workshops conducted through interactive lectures, demonstrations, and group exercises. These sessions focused on improving artisans' understanding of cost components, identifying inefficiencies in their current production practices, and practicing cost calculation using real data from their weaving activities. The training applied adult learning principles, emphasizing practical application, dialogue, and collaborative learning. Participants were guided to compute cost structures, analyze price-setting strategies, and prepare simple financial records using structured worksheets.

2.5 Hands-On Mentoring and Assistance

After the workshop, the team conducted individualized and group mentoring sessions to ensure that artisans could apply the concepts in real production scenarios. Mentoring included assistance in:

- Recording daily production expenses
- Calculating per-unit costs for various weaving products
- Designing cash flow projections
- Developing pricing strategies aligned with market conditions

Mentoring was performed at artisans' homes and weaving sites to capture real production conditions and provide immediate feedback on cost management practices.

2.6 Monitoring, Evaluation, and Follow-Up

The effectiveness of the program was evaluated through pre- and post-assessments, observation checklists, and feedback interviews. The evaluation measured changes in artisans' knowledge, accuracy in cost calculation, and ability to maintain basic financial records. The team also documented artisans' challenges and proposed follow-up programs, such as digital marketing training and group raw-material purchasing systems, to support long-term sustainability.

3. Results and Discussion

The implementation of the community service program on production cost management for weaving artisans in Kampung Tenun Rongkong produced several important findings related to the artisans' initial conditions, improvements in knowledge and skills, and the practical application of cost calculation techniques. Overall, the program contributed to increased financial awareness, enhanced pricing accuracy, and stronger capacity for managing production operations more efficiently.

3.1 Initial Conditions of the Weaving Artisans

The preliminary assessment revealed that most artisans lacked an adequate understanding of production cost components. They typically relied on rough estimates based on experience without distinguishing between direct material costs, direct labor costs, and relevant overhead costs such as electricity, loom maintenance, dye usage, or auxiliary tools. This condition aligns with prior studies

showing that the absence of structured cost calculation leads to inaccurate product pricing and suboptimal profit margins (Ramli, 2019; Hartono, 2013).

Furthermore, artisans did not maintain systematic financial records. Daily expenditures—for example, the purchase of yarn, dyes, or weaving tools—were rarely documented. As a result, artisans struggled to determine actual production costs and could not assess their profit levels per product unit. This aligns with the findings of Putri and Sulistyo (2020), who emphasize that micro-scale craft industries often face difficulties in evaluating financial performance due to the lack of basic bookkeeping practices.

3.2 Implementation of Training and Capacity Improvement

The community service activities were executed through structured sessions involving socialization, technical training, group discussions, and hands-on mentoring. During the introductory session, basic concepts of cost classification were presented, including direct materials, direct labor, and manufacturing overhead. Artisans were introduced to the importance of determining the Cost of Goods Manufactured (COGM) and Cost of Goods Sold (COGS) as the foundation for accurate pricing decisions. The technical training sessions involved practical exercises where participants identified their actual production costs using real data taken from their weaving activities. Artisans learned to calculate labor costs based on weaving duration and complexity, while overhead costs were assessed using simple allocation methods suitable for small-scale production environments. The training reflected principles of cost accounting as described by Mulyadi (2012), emphasizing cost accuracy as a basis for managerial decision-making.

Group discussions further strengthened artisans' understanding of cost behavior analysis, particularly distinguishing between fixed and variable costs. Many artisans reported that they had previously overlooked several important cost components—such as maintenance of looms, depreciation of tools, and transportation fees for raw materials—which should have been incorporated into the production cost structure. These findings confirm earlier studies highlighting the need for cost awareness among traditional craft industries to ensure sustainability and competitiveness (Sari & Dewi, 2021).

3.3 Changes in Cost Management Practices

After the mentoring sessions, observable changes occurred in the artisans' cost management behavior. Several artisans began recording daily expenditures using simple templates provided during the training. They demonstrated improved competence in calculating per-unit production costs and were able to set selling prices that reflected more accurate cost structures. Moreover, artisans showed increased awareness of the importance of monitoring raw material usage to reduce waste and improve efficiency. Some began exploring alternative procurement methods, such as collective purchasing of raw materials, to take advantage of lower prices. This shift indicates a positive transformation toward more cost-conscious and strategic decision-making, in line with previous findings on the impact of entrepreneurial training on micro-enterprises (Lestari & Santoso, 2019).

3.4 Impact on Pricing, Profitability, and Operational Efficiency

The application of cost calculation methods enabled artisans to revise their pricing strategies. Before the training, product prices were largely determined by convention or competitor benchmarks. After understanding COGM and COGS, artisans could justify price increases for products previously undervalued due to unrecognized cost components. Conversely, for items with higher production efficiency, artisans were able to offer more competitive prices while still maintaining profit margins.

Additionally, artisans reported improved clarity regarding profitability. The introduction of simple financial tools—such as worksheets for daily expenses and cost summaries—helped them track financial performance more accurately. This improvement supports existing literature stating that basic cost management education enhances micro-enterprise sustainability and empowers artisans in making informed business decisions (Widyaningrum et al., 2020).

3.5 Discussion of Challenges and Future Needs

Despite the positive outcomes, several challenges remain. Some artisans still require continued mentoring to ensure consistency in record-keeping and cost allocation. Limited digital literacy also hinders the adoption of simple digital bookkeeping tools, suggesting the need for follow-up training. Furthermore, the artisans expressed interest in expanding the program to include marketing strategies, digital promotion, and product diversification, which are crucial for strengthening their competitiveness in wider markets. These needs align with previous research highlighting that integrated training—combining cost management, marketing, and digital skills—produces stronger outcomes for traditional craft communities (Rahmawati & Yuliana, 2022).

4. Conclusion

4.1 Conclusion

This community service program successfully improved the capacity of weaving artisans in Kampung Tenun Rongkong in understanding and applying production cost management. Prior to the intervention, artisans relied heavily on intuition and traditional practices, resulting in inaccurate cost calculations and inconsistent pricing decisions. Through structured training, mentoring, and hands-on practice, artisans developed the ability to identify cost components, calculate cost of goods manufactured, and record financial transactions more systematically. These improvements indicate that targeted financial literacy and cost management interventions can significantly enhance the operational performance and sustainability of traditional craft industries.

4.2 Practical Implications

The findings of this program have several practical implications. First, artisans now possess the knowledge needed to establish more accurate and competitive pricing strategies, enabling them to increase profit margins and strengthen their bargaining position in the market. Second, the introduction of simple financial recording tools helps artisans monitor production expenses and evaluate profitability more effectively. Third, the program highlights the importance of continued mentorship and community-based learning models for microenterprises, particularly in rural craft sectors. Stakeholders such as local government agencies, cooperatives, and community organizations may adopt the framework used in this program to support similar craft-based micro-industries.

4.3 Limitations

Although the program delivered substantial benefits, it is not without limitations. The relatively short duration of mentoring restricted the extent to which long-term behavioral change in financial management could be observed. Additionally, variations in literacy levels among artisans posed challenges in delivering uniform comprehension of the training materials. The program also focused exclusively on production cost management and did not address other strategic business areas such as marketing, digital promotion, supply chain efficiency, and access to broader markets. These limitations suggest the need for a more holistic approach in future interventions.

4.4 Recommendations

Based on the outcomes and limitations, several recommendations are proposed. Future community service programs should extend the duration of mentoring to ensure sustainability in artisans' record-keeping and cost management practices. Training modules may incorporate digital literacy and introduce simple digital bookkeeping tools to enhance efficiency. Furthermore, capacity-building should be expanded to cover marketing strategies, brand development, and digital marketplace engagement to improve artisans' competitiveness. Stakeholders are encouraged to establish ongoing partnerships with artisan groups to facilitate continuous learning, innovation, and economic empowerment within the weaving community.

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