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MENTORING ON COST OF GOODS SOLD (COGS) CALCULATION AND DIGITAL BUSINESS STRATEGY FOR MANGGARAI COFFEE BEAN PROCESSORS

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Abstract

This community engagement initiative aims to enhance the financial management capabilities and digital market competitiveness of Micro, Small, and Medium Enterprises (MSMEs) in the Manggarai coffee processing sector. This group is pivotal to the local economy but often faces significant challenges with accurate product costing and with using digital platforms for marketing. The target audience includes small-scale coffee processors and farmer groups in Manggarai, Flores, who generally possess high product quality but lack formal business management and digital marketing skills. The implementation methods included a participatory mentoring approach, including face-to-face workshops, practical simulations to calculate the Cost of Goods Sold (COGS), and interactive training on digital branding and the use of e-commerce platforms. The results indicate a significant improvement in participants' ability to accurately calculate COGS, enabling them to set more competitive and profitable prices. Furthermore, participants successfully developed basic digital marketing plans and established online presences (social media and marketplaces), resulting in initial expansion of their market reach. This program highlights the critical need for integrating financial literacy with digital skills to enhance the resilience and scalability of local commodity producers in the global market.

Keywords: *Community Engagement, Cost of Goods Sold (COGS), Digital Strategy, MSMEs, Manggarai Coffee, Financial Literacy*

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are a fundamental pillar of the

Indonesian economy, contributing significantly to the national Gross Domestic Product (GDP) and absorbing the vast majority of the nation's workforce (Tambunan, 2011). Within this sector, agribusiness MSMEs, particularly those processing high-value commodities such as coffee, play a crucial role in regional economic development and poverty reduction. Manggarai, Flores, is globally renowned for its specialty Arabica and Robusta coffee, yet many local processors operate traditionally, hindering their potential for growth and profitability.

One of the most critical challenges these coffee processors face is a lack of financial literacy, particularly in product costing. Many MSMEs fail to calculate their Cost of Goods Sold (COGS) accurately. They often use intuitive pricing, based on competitors' prices or simple mark-ups from the raw material (green bean) cost alone. This practice leads to an omission of other significant production costs, such as direct labor (sorting, roasting, grinding), packaging, and factory overhead (gas, electricity, equipment depreciation), resulting in unstable profit margins and difficulty in assessing true business performance (Mustikowati et al., 2025).

Compounding this issue is the challenge of market access. In the digital era, business competitiveness is increasingly dependent on a strong online presence. However, many processors in regional areas, such as Manggarai, are constrained by a digital skills gap. While they may use social media for personal communication, they lack the strategic knowledge to leverage digital platforms—such as Instagram, Facebook, and e-commerce marketplaces (e.g., Tokopedia, Shopee)—for branding, marketing, and sales. This digital divide limits their market reach, confining them primarily to local buyers or intermediaries who capture a larger share of the value.

The combination of these two factors creates a significant vulnerability. The low financial literacy figures in Indonesia, where the national financial literacy index was only 49.68% in 2022 (OJK, 2022), are even more pronounced among micro-entrepreneurs in rural areas. This lack of financial acumen, coupled with low digital literacy (Kominfo, 2023), means that even processors of premium-quality coffee cannot compete effectively, scale their operations, or attract formal financing, as they lack proper financial records and market penetration strategies.

Previous studies and interventions have often focused on either financial literacy or digital adoption in isolation (Riyasa et al., 2024). However, for a commodity-based MSME, these two elements are deeply intertwined. An effective digital marketing strategy that attracts new customers is unsustainable if the product is priced incorrectly (below its true COGS). Conversely, accurate COGS calculation is of limited use if the business has no access to a broader, more profitable market. A gap exists for an integrated intervention that addresses both costing and digital sales strategies simultaneously.

Therefore, this community engagement program was designed to provide targeted, hands-on mentoring for Manggarai coffee bean processors. The objective was twofold: first, to equip participants with the practical skills to accurately calculate their COGS for precise pricing and profit management. Second, to build their capacity to develop and execute a simple, effective digital business strategy. This dual approach aims to foster a more resilient, profitable, and scalable coffee MSME ecosystem in Manggarai, enabling local processors to capture more value from their premium products.

METHOD

The implementation method for this community engagement program was designed using a participatory, educational approach, emphasizing hands-on practice and direct mentoring tailored to the specific context of coffee processing.

1) Target Audience and Location
   The activity was focused on coffee processors in the Manggarai Regency, Flores, NTT. The target audience consisted of 30 participants, comprising owners of small-scale coffee roasting houses (home industry) and managers of local farmer

cooperatives (Kelompok Tani). Participants were selected through collaboration with the local Trade and Industry Office, prioritizing those in operation for at least two years but with minimal digital presence and lacking formal financial records.

2) Module and Material
   Educational materials were developed to be simple, visual, and highly practical. The materials covered two main themes:
   a. Financial Literacy (COGS): Identifying cost components (Raw Materials: green beans, water; Direct Labor: sorters, roasters; Factory Overhead: roasting gas, electricity, machine depreciation, packaging). A simplified Excel and manual-write template for calculating COGS per kilogram of roasted coffee. Setting a profitable selling price (Cost-Plus Pricing).
   b. Digital Business Strategy: Fundamentals of digital branding (Logo, storytelling, unique selling proposition of Manggarai coffee). Content creation using a smartphone (basic product photography and video) and utilizing social media (Instagram/Facebook Business) for marketing. Setting up and managing a store on an e-commerce platform (Tokopedia). Materials were provided in Indonesian (Bahasa Indonesia) in the form of printed modules, presentation slides, and video tutorials.
3) Implementation Stages The program was executed over three days, followed by a one-month mentoring period:
   a. Day 1: COGS Workshop. Included a pre-test, presentation of COGS concepts, and a simulation where participants calculated their own product's COGS using the template with guidance from the team.
   b. Day 2: Digital Strategy Workshop. Focused on branding and content creation. Participants practiced taking product photos with their smartphones and writing compelling captions.
   c. Day 3: Digital Platform Practice. Participants were guided step-by-step to create a business Instagram account and a Tokopedia store, uploading their product photos and descriptions.
4) Post-Activity Mentoring: A WhatsApp group was established for one month to provide ongoing consultation, answer questions, and monitor participants' progress in implementing their new skills.
5) Evaluation Program effectiveness was evaluated using a mixed-method approach:
6) Pre-test and Post-test: To measure the quantitative increase in participants' knowledge regarding COGS components and digital marketing terms.
7) Practical Assessment: Evaluation of the COGS calculation templates filled by participants and the quality of the e-commerce stores they created.
8) Satisfaction Questionnaire: To gauge participant feedback on the relevance of the material, the effectiveness of the mentors, and the overall usefulness of the program.

RESULT AND DISCUSSION

The community engagement program yielded significant and measurable outcomes from the 30 participants. The baseline (pre-test) data confirmed the initial needs assessment: 90% of participants (27 out of 30) were unable to correctly identify and differentiate between raw material, direct labor, and overhead costs in a provided scenario. In terms of digital readiness, 85% used WhatsApp for communication, but only 10% (3 participants) had an active e-commerce store, and none used a formal business social media account.

Following the intensive workshops, post-test results showed a dramatic improvement in understanding. The average score on the financial literacy knowledge test increased from 35 (pre-test) to 82 (post-test). On the practical application side, 83% of participants (25 out of 30) were able to successfully and accurately complete the COGS calculation template for their main coffee product, incorporating costs they had previously ignored, such as packaging, roasting gas, and equipment depreciation.

In the digital strategy component, 100% of participants had successfully created at least one e-commerce product listing (on Tokopedia) and an accompanying business Instagram account by the end of Day 3. During the one-month mentoring period that followed, 12 participants (40%) reported their first-ever online sales originating from outside their immediate region (e.g., from Jakarta and Surabaya). Qualitative feedback gathered through questionnaires was overwhelmingly positive, with 93% of participants rating the program as "very useful" and "directly applicable" to their business. A cooperative manager stated, "We have been selling coffee for years, but only calculated the green bean price. After the COGS simulation, we realized our selling price was too low, barely covering our costs.

Discussion

The quantitative leap in post-test scores, particularly the 83% success rate in COGS template completion, strongly supports existing literature on the importance of financial literacy for MSME performance (Mustikowati et al., 2025). The findings suggest that the primary obstacle for these processors was not the inherent complexity of the accounting, but the lack of a simplified, contextualized tool. The "COGS template for coffee" provided this bridge. By mastering their costs, participants are now in a position to move from reactive, market-driven pricing to a proactive, cost-plus strategy, which is fundamental for sustainable profitability.

The digital component's success, evidenced by 100% platform creation and 40% initial sales, aligns with research emphasizing digital adoption as a key driver for market expansion (Putra, 2020). The discussions revealed that the mentoring was crucial not just for technical setup, but for building confidence. The primary barriers were psychological (fear of technology, fear of scams) rather than technical. The reported sales, even if small, represent a significant shift, demonstrating tangible proof that they can access a national market directly, thereby reducing dependence on local intermediaries.

Despite the successes, the challenges identified during the program are significant and contextualize the findings. Inconsistent internet connectivity in remote villages remains a major structural barrier, hampering real-time e-commerce management. Furthermore, the "wait and see" attitude observed in some participants, who still preferred bulk sales to intermediaries for quick cash, indicates that technical training alone is insufficient. This highlights a need for ongoing mindset coaching to emphasize the long-term value of brand building over short-term cash flow, suggesting a limitation of short-term interventions.

CONCLUSION

In summary, this community engagement program successfully addressed its primary objectives. The initiative set out to enhance the financial literacy and digital business acumen of Manggarai coffee bean processors, a group vital to the regional economy yet underserved in business education. The post-program evaluations confirm that the intervention was highly successful, demonstrating measurable gains in both core competencies. This outcome validates the program's initial hypothesis that targeted, hands-on mentoring can bridge critical skill gaps for micro-entrepreneurs.

The effectiveness of the program's design centered on its dual-focus mentoring approach. By interweaving Cost of Goods Sold (COGS) calculation with digital strategy implementation, the program mirrored the real-world interdependence of these two business functions. This integrated model proved significantly more impactful than isolated training sessions, as participants could immediately see *why* accurate pricing (from COGS) was essential for a sustainable online business (digital strategy), and *how* a digital presence could justify their new, more accurate pricing.

The most significant quantitative improvement was observed in financial literacy. Participants demonstrated a clear, measurable increase in their ability to calculate production costs, moving beyond simple raw-material markup accurately. This new skill is not merely an academic exercise; it directly translates into more informed, strategic pricing. By understanding their actual costs, these processors are now empowered to set prices that ensure profitability, protect their margins, and build a more financially resilient operation.

Furthermore, the program was pivotal in guiding participants to overcome psychological and technical barriers to digital adoption. The establishment of new online presences on e-commerce and social media platforms signifies a crucial step towards market expansion. For many, this intervention facilitated their first-ever sales outside their immediate geographic region. This digital empowerment begins to loosen the dependency on local intermediaries. It opens a direct channel to a broader, national customer base, which is essential for long-term growth and brand building.

A key factor in this success was the pedagogical method employed. The shift from theoretical lecturing to a participatory, simulation-based model was critical. By working with their *own* product data in the COGS templates and building their *own* digital storefronts, participants engaged in active, applied learning. This 'learning by doing' approach was instrumental in translating complex business concepts, which are often intimidating to micro-entrepreneurs, into tangible, manageable, and immediately applicable skills.

Ultimately, this initiative confirms that an integrated strategy—one that weds financial management with digital marketing—is critical for enhancing the competitiveness of high-value commodity MSMEs in Indonesia. The positive results from this engagement in Manggarai serve as a strong model for future interventions. To build a truly resilient and scalable MSME ecosystem, it is essential to move beyond fragmented training and adopt a holistic approach that equips producers with the full suite of financial and digital tools needed to thrive in the modern economy.

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