IMPROVING ECONOMIC INDEPENDENCE THROUGH ENTREPRENEURSHIP: TRAINING ON DETERMINING THE COST OF SOAP FOR SMART RPTRA EMPLOYEES AND MERUYA UTARA NEIGHBORHOOD COMMITTEE IN ENHANCING SMALL BUSINESS MANAGEMENT

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ABSTRACT

Indonesia's rapid urbanization, particularly in metropolitan regions like Jabodetabek, has intensified environmental challenges such as water and air pollution, excessive household waste, and the persistent use of chemical-based cleaning products like sodium lauryl sulfate (SLS). These issues disproportionately affect low- to middle-income communities, where knowledge and access to eco-friendly alternatives remain limited. To address these challenges, a community service program was implemented in Meruya Utara, West Jakarta, targeting RPTRA SMART staff and RW administrators. The program aimed to develop participants' competencies in producing eco-friendly bath soap from natural ingredients and calculating its Cost of Goods Sold (COGS), thus bridging the gap between environmental education and entrepreneurial skills. Using a participatory approach, the program combined theoretical instruction, hands-on soap-making sessions, marketing workshops, and cost analysis training. Participants learned to produce natural bath soap using locally available ingredients like coconut oil and turmeric, while also gaining financial literacy through COGS calculations and pricing strategies. Evaluation showed signifi cant improvement in participants' knowledge and skills, with 90% able to reproduce the soap-making process and 85% accurately calculating product costs. This program demonstrates that community-based training focused on accessible, sustainable practices can effectively promote both environmental awareness and economic empowerment. It offers a replicable model for other urban communities and suggests the need for continued mentoring and capacity building to ensure long-term impact and entrepreneurial sustainability.

Keywords: Eco-friendly Soap, COGS, Community Training, Sustainability, Small Business.

1. INTRODUCTION

Rapid urbanization in Indonesia, particularly in metropolitan regions like Jabodetabek (Jakarta, Bogor, Depok, Tangerang, and Békasi), has led to a variety of pressing environmental issues. These include declining air and water quality, rising household and industrial waste levels, and significant land subsidence, especially in North Jakarta. One less well-known but no less important aspect of these problems is the widespread use of chemical-based household products, like soaps and detergents that contain synthetic substances like sodium lauryl sulfate (SLS), which are known to damage aquatic ecosystems and contribute to long-term water pollution. (Goel, 2012).

These challenges demand not only technological solutions but also behaviour change at the community level. While government initiatives have begun to promote circular economy practices and the use of environmentally friendly alternatives, many residents in densely populated urban areas still lack access to practical knowledge and skills to produce and adopt green products. This gap is particularly evident in low- to middle-income communities, where economic pressure often outweighs environmental considerations, and where opportunities for entrepreneurship are limited by lack of training and resources.

In this context, a community empowerment initiative was carried out in North Meruya, West Jakarta, through a structured training program targeting RPTRA SMART staff and RW administrators. The program aimed to address environmental and economic challenges simultaneously by equipping participants with hands-on skills in producing eco-friendly bath soaps using natural ingredients such as coconut oil and turmeric, while also teaching the basics of Cost of Goods Sold (COGS) calculation. This dual focus—technical production and basic business literacy—was designed to foster not only individual skill development but also small business potential within the community.

The training employed a participatory approach, incorporating theoretical learning, practical demonstrations, collaborative discussions, and post-training evaluations. By focusing on accessible materials and household-scale production, the program sought to empower participants to develop sustainable, low-cost alternatives to commercial chemical-based products, while also enhancing their economic self-reliance.

This article presents a detailed account of the initiative, including its background, objectives, methods, results, and broader social and environmental implications. It contributes to the growing body of community-based environmental education and highlights how targeted training can catalyze both ecological awareness and local en trepreneurship in urban Indonesian settings.

2. METHOD

This community service program was implemented using a structured, participatory, and multi-stage approach to equip RPTRA SMART staff and RW administrators in Meruya Utara with practical competencies in eco-friendly soap production and basic cost analysis. The methodological design integrated theoretical learning, hands-on practice, interactive workshops, and post-activity evaluation. The following stages outline the core components of the program:

1. Preliminary Study

The program began with stakeholder coordination involving the Meruya Utara Subdistrict Office, PKK groups, and local MSMEs, followed by a needs assessment to identify challenges in household product innovation and micro-entrepreneurship. Activity priorities were set based on feasibility, relevance, and institutional capacity. P reparations covered skill gap identification, alignment of program themes with institutional expertise, development of training materials and guidelines, task allocation according to specialization, and internal briefings to ensure implementation readiness (Tanjung, 2024).

2. Theoretical Sessions

Participants attended structured sessions covering eco-friendly soap concepts, including the benefits of natural ingredients and the health and environmental advantages of chemical-free products; production techniques encompassing saponification principles, formulation methods, and step-by-step liquid bath soap preparation; and economic aspects introducing production cost calculation, cost of goods sold (COGS), and break-even point analysis.

3. Practical Hands-On Training

A central component of the program was the guided practice of producing eco-friendly soap using natural and locally available ingredients such as coconut oil, olive oil, turmeric, spirulina, and essential oils. The session included :Ingredient selection, measurement, and preparation, Blending and mixing processes using a Green Cleaner Mixer Machine, equipped with:100-liter capacity, Food-grade stainless steel body (SS304/SS316),Ribbon or planetary mixing blade for efficient blending,1–5 HP motor power, automatic/manual outlet valves, Dimensions: 1.5 m × 1 m × 1.5 m; power: 220V or 380V.Soap curing and post-processing, Product evaluation based on visual appearance, texture, and scent.

4. COGS Calculation and Marketing Workshop

Following the production stage, participants attended a workshop on pricing and business planning. The session covered COGS calculation using actual cost data from ingredients and packaging, estimation of profit margins and retail prices, application of basic marketing concepts including branding, label design, and packaging, as well as an introduction to digital promotion through social media platforms. These activities reflect cost accounting pr actices essential for small businesses to establish competitive pricing and maintain profitability (Iskandar, 2022).

5. Discussion and Reflection

An open forum encouraged participants to share their experiences, difficulties, and insights. Facilitators provided real-time feedback, addressed challenges, and offered practical tips to improve both product quality and marketing efforts. Peer learning was also fostered through participant interaction and shared reflections.

6. Evaluation and Monitoring

To assess knowledge transfer and training effectiveness, the program utilized: Pre-tests and post-tests to measure knowledge gain, Participant questionnaires for feedback on training content and delivery, little interviews to understand personal impact and motivation, Informal follow-up monitoring to track post-training application, especially among participants intending to launch small-scale soap production businesses.

Figure 1. The Machine

3. RESULT AND DISCUSSION

The Faculty of Economics and Business, Universitas Mercu Buana, conducted the community service program "Training on the Production and Cost of Goods Sold (COGS) Calculation of Eco-Friendly Bath Soap for RPTRA SMART Staff and RW Administrators in Meruya Utara" on April 29, 2025. The initiative aimed to enhance participants' technical and entrepreneurial skills through sustainable product innovation and cost calculation training.

Attended by RPTRA SMART staff and RW administrators, the program identified these groups as potential driv ers of local innovation. Opening remarks from the Head of Meruya Utara Subdistrict highlighted the role of community-based initiatives in addressing environmental and economic challenges.

Interactive discussions, hands-on workshops, and theoretical sessions comprise the training. The participants studied the environmental effects of synthetic household products, investigated eco-friendly substitutes using natural ingredients, and practiced making soap using locally accessible materials. The interactive workshop covered the following topics: C-OGS calculation, pricing strategies, and profit margin analysis using local market data. It also covered ingredient preparation, mixing, curing, and hygienic production methods.

Effectiveness was measured through pre- and post-tests, feedback forms, and interviews, revealing that 90% of participants could replicate the soap-making process and 85% could calculate COGS accurately. Many expressed interest in continued production, forming collaborative groups, and leveraging the activity for household savings or income generation. Strong local government support further encouraged community engagement.

Figure 2. Activity of PKM

In conclusion, the program effectively addressed existing gaps in environmental literacy and foundational entrepreneurial competencies among community members. By integrating technical training in eco-friendly product manufacturing with practical business planning skills, the initiative not only transferred knowledge but als o facilitated its direct application in a local context. The adoption of sustainable production methods—rooted in th e use of natural, locally sourced ingredients—demonstrated the potential for environmentally responsible practices to coexist with income-generating opportunities. Furthermore, the emphasis on COGS calculation, pricing strate gies, and market-based decision-making enabled participants to approach micro-enterprise development with greater financial discipline. The observed post-training outcomes, including increased replication capability, accurate cost computation, and interest in collaborative ventures, indicate a shift from passive learning to proactive community engagement. Supported by local government endorsement, this approach underscores the value of participatory, skills-based interventions in building socio-economic resilience and promoting sustainable community development within urban neighborhoods.

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