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Strengthening Women's Economic Independence through Creative Economy-Based Community Empowerment by Optimizing Local Banana Resources in Tongkaina Village

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Abstract: *Women's empowerment based on the creative economy is a strategic approach to strengthening community economic independence, particularly in rural areas. This research was conducted in Tongkaina Village, which possesses abundant banana resources that have not been optimally utilized. The empowerment program was designed to enhance women's economic capacity through the application of appropriate technology and market diversification strategies. The program focused on processing banana plants into value-added products such as banana leaf tea, banana chips, and banana fiber-based handicrafts. Using a mentoring and participatory approach, the program involved 25 women participants who received training in production techniques, basic business management, and marketing strategies. The results indicate that approximately 50% of participants experienced improved production skills, while average household income increased by around 80% after the implementation of the program. In addition to economic benefits, the program strengthened women's self-confidence, entrepreneurial motivation, and active participation in community economic activities. Furthermore, social impacts were observed in the form of increased solidarity, cooperation, and collective awareness among women in utilizing local resources sustainably. Overall, this study demonstrates that creative economy-based empowerment using local banana resources can serve as a replicable and sustainable empowerment model for other rural villages with similar natural resource potential.*

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INTRODUCTION

Women's empowerment has become a crucial focus in sustainable development. According to UN Women (2022), enhancing women's capacity in the economic sector directly contributes to poverty reduction, improved family welfare, and local economic growth. In the Indonesian context, data from the Central Bureau of Statistics (BPS, 2023) indicates that women's labor force participation remains largely concentrated in informal and domestic sectors, with limited access to skills training and micro-enterprise development, particularly in rural areas.

This national condition is also reflected at the local level. Based on data from the Central Bureau of Statistics of Manado City and the Tongkaina Village Profile (2023), a considerable number of women of productive age in Tongkaina Village are not formally employed and rely primarily on irregular household-based activities. Limited employment

opportunities and lack of practical skills training have resulted in low economic participation among local women, despite the availability of abundant natural resources in the village. This situation highlights a critical gap between local resource potential and women's economic empowerment, thereby underscoring the urgency of targeted intervention programs.

This issue is especially evident in rural areas that possess abundant natural resources but suffer from inadequate management and utilization. Tongkaina Village, located in the Bunaken Subdistrict of Manado City, exemplifies such a condition. Banana plants grow naturally and abundantly in the residential yards of local communities. However, their utilization remains limited to household consumption or the sale of raw fruit with low economic value. This practice reflects an under-optimization of local resources that could otherwise provide sustainable economic benefits for women and their families.

According to Nurhadi et al. (2021), all parts of the banana plant including the leaves, fruit, stems, and fibers have the potential to be processed into a wide range of value-added products, such as banana leaf tea, banana chips, and banana fiber crafts. Nevertheless, local women face several structural challenges that hinder the development of this potential, including (1) limited skills in agricultural product processing, (2) restricted market access, and (3) insufficient understanding of simple and appropriate processing technologies.

To address these challenges, this community empowerment program proposes a participatory and skill-building approach aimed at enhancing women's capabilities in processing banana plants into commercially viable products. The program includes hands-on training workshops on the production of banana leaf tea, banana chips, and fiber-based crafts, as well as mentorship in basic business management and marketing, including the use of digital platforms to expand market reach.

The implementation strategy emphasizes active community participation through practical training and continuous mentoring, with the ultimate goal of fostering a sustainable local business ecosystem. Expected outcomes include increased entrepreneurial skills among women, the creation of diversified banana-based products, and the development of a replicable empowerment model that can be applied in other rural areas with similar characteristics. Beyond economic benefits, this initiative seeks to strengthen local awareness and appreciation of indigenous resources as a foundation for long-term community welfare.

LITERATURE REVIEW

Women's Economic Independence and Community Empowerment

Women's economic empowerment has been widely recognized as a key driver of sustainable community development, particularly in rural areas with strong dependence on local natural resources. Empowerment is not merely defined as income generation, but also as the enhancement of women's capacity to access resources, make economic decisions, and sustain livelihoods independently (Akbari et al., 2024). Community-based empowerment emphasizes participatory processes, collective action, and local ownership, enabling women to actively engage in economic activities aligned with their socio-cultural context (Tjilen et al., 2018; Wuryan et al., 2025).

Several studies highlight that women's empowerment is most effective when it integrates skill development, institutional support, and social participation. In Papua and other rural regions, women's participation in local economic activities has proven to

strengthen household resilience and community welfare when supported by structured empowerment programs (Tjilen et al., 2018; Gwatirisa et al., n.d.; Visiana, 2025).

Creative Economy and Local Resource Optimization

The creative economy approach has emerged as a strategic pathway to increase value-added production by transforming local resources into market-oriented products. Kusuma et al. (2024) demonstrate that optimizing banana-based products through entrepreneurship training significantly improves women's economic independence in rural villages. Their findings emphasize that local commodities, when supported by innovation and market access, can shift communities from subsistence-based activities to sustainable micro-enterprises.

Banana plants, in particular, have been identified as versatile agricultural resources with high economic potential. Novitasari (n.d.) highlights that banana cultivation and processing not only enhance farmers' income but also contribute to regional economic resilience. Similar findings are reported in studies conducted in Papua New Guinea, where women smallholders successfully increased household income through banana-based agribusiness supported by training and community development initiatives (Gwatirisa et al., n.d.).

These studies underline that creative economy-based empowerment rooted in local resources offers a replicable strategy for rural development, especially in areas with abundant yet underutilized agricultural commodities.

Women's Entrepreneurship and MSME Development

Recent literature emphasizes the growing role of digital tools and financial literacy in enhancing women's economic empowerment. Showkat et al. (2025) reveal that financial literacy positively influences women's economic empowerment, with digital financial services acting as a critical mediating factor. Similarly, Loaba et al. (2025) demonstrate that access to digital finance services significantly improves women's control over income and economic decision-making in rural contexts.

Pundhir et al. (2025) further argue that digital marketing platforms, supportive government policies, and NGO involvement collectively strengthen rural women's entrepreneurship. These findings are particularly relevant to creative economy initiatives that rely on digital promotion and online market expansion, enabling women to overcome geographical limitations and access broader consumer networks.

Research Gap and Contribution of the Study

Although previous studies have extensively discussed women's empowerment, creative economy development, and digital entrepreneurship, limited research explicitly integrates local resource optimization, creative economy strategies, and organizational sustainability into a single empowerment model. Most existing studies focus either on production training (Kusuma et al., 2024; Ben & Yadav, 2025), financial literacy (Showkat et al., 2025), or institutional participation (Tjilen et al., 2018), without clearly articulating a replicable empowerment framework for villages with similar natural resource potential.

Therefore, this study contributes to the literature by proposing a creative economy-based community empowerment model that strengthens women's economic independence through the optimization of local banana resources, capacity building, mentoring, and MSME-based institutionalization. This integrated approach offers a practical and replicable model for other rural villages seeking sustainable women-led economic development.

RESEARCH METHOD

This creative economy-based women's empowerment program was implemented in Tongkaina Village, North Minahasa Regency, North Sulawesi Province. The location was selected due to its potential in utilizing banana plants that had not yet been optimally processed into value-added products. The program was conducted over a three-month mentoring period.

The empowerment activities were carried out through three main stages, namely awareness-raising, capacity building, and empowerment/implementation. These stages were designed to ensure a gradual and sustainable improvement in participants' knowledge, skills, and entrepreneurial independence.

The awareness-raising stage aimed to increase participants' understanding of the economic and environmental benefits of banana plant utilization. This stage was conducted through group discussions, focusing on product diversification and the role of women in strengthening household and village economies.

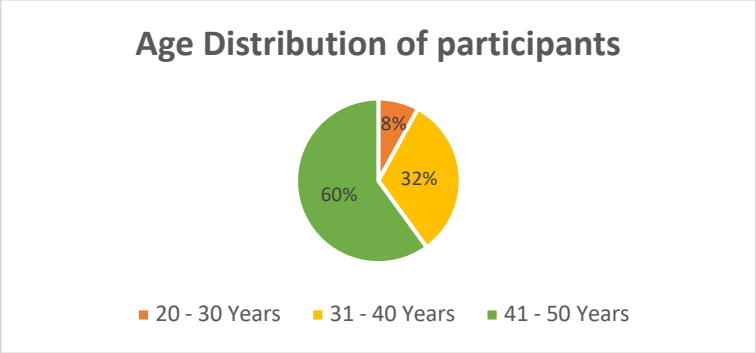
The capacity-building stage focused on improving technical and managerial skills. Participants received training on banana-based product processing techniques (particularly banana chips), selection of quality raw materials, hygienic production processes, packaging standards, simple financial management, and local as well as digital marketing strategies. Hands-on demonstrations were used to ensure participants could directly practice the skills introduced.

The empowerment and implementation stage was conducted through continuous mentoring and consultation. Participants were assisted in applying the acquired skills in real production activities, managing production and finances, and marketing products both offline and through digital platforms. A website-based promotional medium was introduced to support product promotion, facilitate direct customer orders, and store transaction data for basic marketing analysis.

The program involved 25 women participants, consisting of housewives and micro-entrepreneurs. Participants were selected based on active involvement in village community activities, interest in processing banana plants into value-added products, and willingness to participate throughout the mentoring period.

The characteristics of the participants are described based on age distribution. Figure 1 shows the age distribution of women participating in the empowerment program in Tongkaina Village. The majority of participants (60%) were aged 41–50 years, followed by 31–40 years (32%), while only 8% were aged 20–30 years. This indicates that the program mainly involved women in their productive middle age, who tend to have strong commitment to household economic activities.

Figure 1. Age Distribution of Participants



RESULTS AND DISCUSSION

Table 1 presents the diversification of banana-based products developed by participants during the empowerment program.

Table 1. Diversification of Banana-Based Products

NO	PRODUK NAME	THE MAIN INGREDIENT	TARGET MARKET	PRICE	INCOME (%)
1	Original Goroho Banana Chips	Goroho Banana	Local & Online	10.000/Pack	40%
2	Sweet Kepok Banana chips	Kepok Banana	Local & Online	10.000/Pack	40%

Table 1 shows that two main banana-based products Original Goroho Banana Chips and Sweet Kepok Banana Chips were successfully produced by participants. Both products target local and online markets with affordable prices of Rp 10,000 per package. Each product contributes 40% of total income, indicating balanced market demand and demonstrating that banana-based product diversification provides a sustainable economic opportunity for the community.

Changes in production capacity before and after the program are illustrated in Figure 2.

Figure 2. Comparison of Monthly Banana Production Before and After the Program

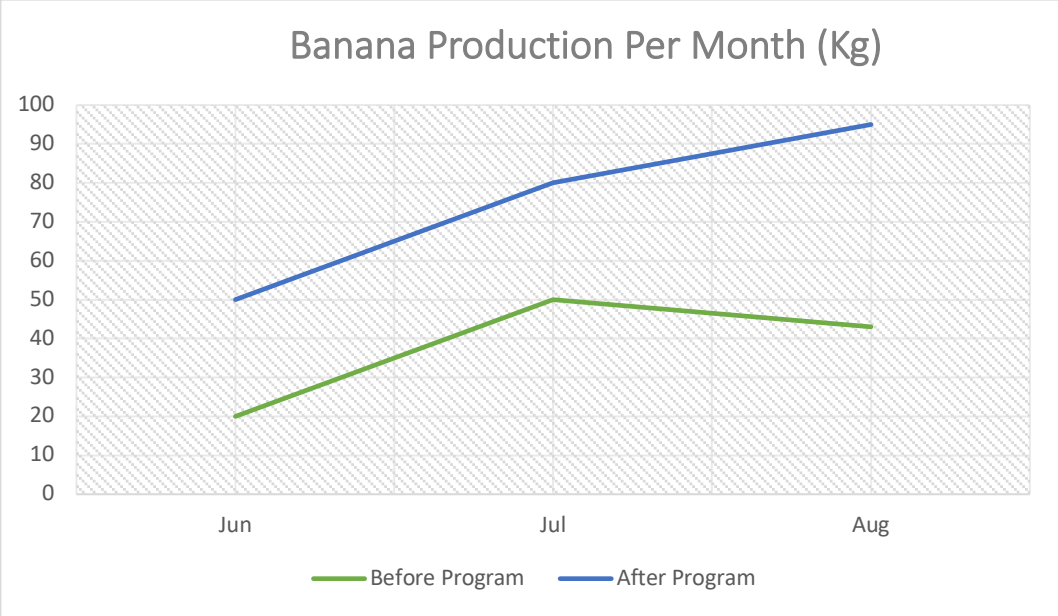
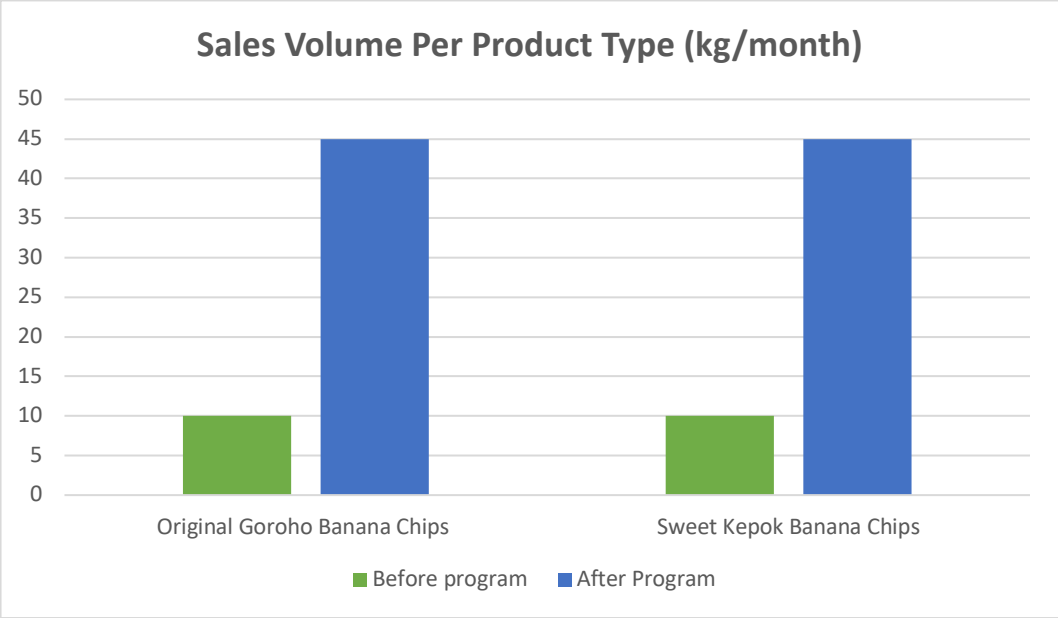


Figure 2 shows a significant increase in banana processing output after the empowerment program, rising from 50 kg in June to 95 kg in August. In contrast, production levels before the program remained relatively low and showed a declining trend after July. This increase indicates that the training and mentoring activities had a direct and positive impact on participants' production capacity.

Figure 3. Sales Volume Per Product Type Before and After the Program



Further improvement can be observed in sales performance. Figure 3 presents the comparison of sales volume per product type before and after the program. The figure illustrates a substantial increase in sales for both Original Goroho Banana Chips and Sweet Kepok Banana Chips. Before the program, sales volumes were limited to approximately 10 kg per month for each product. After the program, sales increased significantly to

around 45 kg per month. This growth highlights the effectiveness of production training, product diversification, and expanded market access.

Participants' perceptions of the program outcomes are summarized in Table 2.

Table 2. Participants Perception Survey Results

Assessment Aspect	Avarage Score	Main Challenge	Improvement Suggestions
Training Quality	45./5	Limited training time	Extend training duration
Diversification Benefits	4.2/5	Unexpected market condition changes	Enhance Brand Value training
Technology Accessibility	4/5	Lack of facilities and technological knowledge among housewives in Tongkaina village	Follow-up training and provision of technology needs & knowledge
Economic Impact	47.5/5	Limited capital, inadequate infrastructure, and lack of continuous assistance	Sustainable mentoring, access to funding, and infrastructure improvement

The survey results indicate that participants highly valued the training quality and perceived strong economic benefits from the program. However, challenges related to training duration, technological access, capital, and infrastructure remain. Participants emphasized the need for sustainable mentoring, improved access to funding, and continued capacity development.

To ensure sustainability beyond the research team's mentoring period, the participants agreed to establish a women's MSME-based business group focused on banana chip production. The organizational structure was formed through a participatory discussion process involving all members. The group consists of a chairperson, secretary, treasurer, and several functional divisions, including production, packaging and quality control, marketing, and finance.

Each division has clear roles and responsibilities to ensure effective coordination and continuity of activities. The chairperson oversees overall operations and external coordination, while the production division manages raw material processing and product quality. The marketing division is responsible for local and digital sales, including website-based promotion, and the finance division manages simple bookkeeping and income distribution. This organizational arrangement enables collective decision-making, workload sharing, and accountability among members.

The establishment of this MSME-based group allows participants to continue production, marketing, and business development independently after the mentoring period. In addition, the group structure facilitates future collaboration with local government, financial institutions, and development partners, thereby strengthening long-term business sustainability.

The main outcomes of the empowerment program include:

1. Banana Chips Production

After the training, 25 participants were able to produce banana chips with the required quality standards. The banana chips have a crunchy texture and a variety of flavors that are in demand by the market, such as savory and sweet.

2 Income Increase
Previously, the majority of participants did not have a regular income but after creative economic activities. Participants were able to have an average income of Rp 1,000,000 - Rp 1,500,000 per month.

3 PIRT license
One of the important achievements in this program is the issuance of a PIRT (Home Industry Product) permit for banana chips produced by participants. With the PIRT permit, the products have the legality to be marketed widely, both at the local and indigenous levels, and increase consumer confidence in product quality and safety.

Program success was measured using several indicators:

1. Participant Skills
Based on the results of the pre-test and post-test, there was an increase in the average score of participants' understanding of production techniques, from 65% before the training to 90% after the training.
2. Income Increase
From having no steady income before, participants are now able to generate income through the production of banana chips that are marketed at the local level and through social media.
3. Product Legality
With the issuance of the PIRT license, banana chip products are now more competitive in the market and have greater opportunities to enter ultramodern retail outlets.
4. Enablers and Barriers
   a) Participant Motivation Participants were very enthusiastic in participating in the training and mentoring.
   b) Community Support Cooperation among participants in sharing experiences and marketing products is the main strength of the program's success.
   c) Market Diversification Local marketing and utilization of social media opened up new opportunities for participants to increase sales.
5. Inhibiting Factors
Access to Capital Some participants face capital constraints to scale up production.

Overall, the implementation of training, mentoring, organizational strengthening, and PIRT licensing successfully addressed most partner challenges. The sustainability of the program will depend on improved access to capital, broader marketing networks, and continued support from local government and strategic partners.

CONCLUSION

This research identifies a replicable community-based empowerment model for villages with similar natural resource potential, referred to as the Local Resource–Based Women's Empowerment Model (LRWEM). This model integrates local resource utilization, capacity building, and organizational strengthening to achieve sustainable economic outcomes.

The LRWEM model consists of four sequential and interrelated stages. The first stage is resource and awareness mapping, where local natural resources and community

readiness are identified through participatory discussions. In this study, banana plants were recognized as an underutilized resource with high economic potential, and awareness activities were conducted to build participants' understanding of value-added processing and sustainable use.

The second stage is capacity building, which focuses on improving participants' technical and managerial skills. This includes training in production techniques, quality control, simple financial management, and marketing strategies, supported by hands-on practice and appropriate technology. This stage ensures that participants possess the competencies required to manage small-scale creative economic activities.

The third stage is empowerment through implementation and mentoring, where participants apply acquired skills in real production and marketing activities. Continuous mentoring and consultation are provided to address technical, financial, and market-related challenges. The use of digital marketing tools and website-based promotion in this study strengthened market access and business resilience.

The final stage is institutional strengthening for sustainability, achieved through the formation of an MSME-based women's business group with a clear organizational structure and legal support, including product legality through PIRT licensing. This stage ensures continuity of activities beyond the research team's involvement and facilitates collaboration with external stakeholders such as local government and financial institutions.

The application of this model in Tongkaina Village has proven effective in increasing women's skills, production capacity, income generation, and business legality. Due to its clear stages, reliance on local resources, and emphasis on mentoring and institutionalization, the LRWEM model can be replicated by other villages with similar natural resource characteristics. By adapting the type of local resource and market context, this empowerment model has strong potential to contribute to sustainable rural economic development and women's economic independence.

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