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Empowering Micro and Small Enterprises (MSEs) Through Training in Digital Marketing, Product Innovation, and Business Management in Gunung Anyar Subdistrict, Surabaya

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Abstract

This community service study examined the empowerment of micro and small enterprises (MSEs) in Kecamatan Gunung Anyar, Surabaya, through an integrated participatory intervention emphasizing digital marketing, product innovation, financial management, and business legality strengthening. The program employed an empirical participatory approach involving culinary and creative-industry entrepreneurs supported by university facilitators, local government institutions, and community stakeholders. The implementation process consisted of field observation, problem mapping, technical workshops, mentoring activities, and sustainability-oriented assistance. Empirical findings demonstrated significant improvement in participants' digital marketing competencies, marketplace utilization, branding awareness, financial recording practices, and institutional readiness for business legalization. Product innovation activities utilizing milkfish-processing waste generated additional economic value while increasing production efficiency through technological support and packaging redesign. The intervention also strengthened entrepreneurial adaptability, managerial accountability, and market orientation among participating enterprises. The study confirms that multidimensional empowerment combining technological adaptation, local resource optimization, financial literacy, and institutional strengthening contributes substantially to enhancing the competitiveness and sustainability of community-based enterprises within rapidly evolving digital economic environments.

Keywords: Digital Marketing, Product Innovation, Financial Literacy, Business Legality, Community Empowerment.



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INTRODUCTION

The transformation of micro and small enterprises (MSEs) into adaptive and innovation-oriented economic actors has become a central agenda within contemporary global development discourse, particularly in the aftermath of accelerating digital disruption, post-pandemic economic restructuring, and the expansion of platform-based commerce ecosystems that increasingly redefine patterns of production, distribution, and consumer interaction. Across developing economies, MSEs are no longer perceived merely as survival-oriented informal sectors, but rather as strategic instruments for inclusive growth, employment absorption, and local economic resilience, especially in urban-peripheral communities characterized by uneven access to technological infrastructure and entrepreneurial capacity. Within Southeast Asian economies, the integration of digital marketing, product innovation, and managerial strengthening into community-based enterprise development has been widely promoted as a mechanism for reducing structural vulnerability and improving competitiveness among small-scale business actors operating under conditions of limited capital accumulation and weak institutional support. In the Indonesian context, the urgency of strengthening UMK capacities is closely associated with their substantial contribution to community welfare and grassroots economic sustainability, although persistent structural barriers continue to constrain their transformation into scalable and competitive enterprises (Al Farisi et al., 2022). At the same time, the rapid penetration of mobile internet and social media platforms has shifted the competitive landscape of local entrepreneurship, compelling community-based enterprises to adopt digital business practices that extend beyond conventional face-to-face transactions and fragmented marketing patterns (Purwana et al., 2017).

Recent scholarly discussions concerning UMK empowerment have increasingly emphasized the importance of integrating digital marketing capabilities, financial literacy, and innovation-based

production strategies as interconnected dimensions of sustainable enterprise development rather than isolated intervention components. Studies conducted by Fadhilah and Pratiwi (2021) demonstrate that the application of digital marketing strategies significantly enhances market visibility and customer engagement among small enterprises, particularly when entrepreneurs are able to utilize social media platforms as interactive promotional ecosystems rather than passive advertising channels. Parallel findings from Jatmoko et al. (2023) further indicate that community-based digital marketing interventions contribute not only to expanded market access but also to the reconfiguration of entrepreneurial behavior toward more adaptive and data-responsive business practices. Nevertheless, the literature simultaneously reveals that technological adoption among UMKs remains highly uneven due to disparities in managerial competence, digital literacy, and institutional facilitation, causing many empowerment programs to produce temporary rather than transformative impacts. Brahmana et al. (2022) extend this debate by arguing that digital empowerment becomes substantially more effective when accompanied by technopreneurship-oriented mentoring capable of cultivating innovation culture and global competitiveness among local business actors. Such findings collectively suggest that the success of UMK empowerment depends not solely on technological introduction, but on the capacity of empowerment frameworks to integrate behavioral transformation, entrepreneurial adaptation, and contextualized assistance mechanisms into a coherent development strategy.

Despite the growing body of literature on UMK empowerment, significant conceptual and empirical limitations remain insufficiently addressed, particularly regarding the fragmented nature of intervention models employed in many community engagement programs. Existing studies tend to isolate digital marketing training, financial management assistance, or product diversification into separate analytical domains without sufficiently examining their interdependence within real community ecosystems. Research focusing on accounting assistance and financial literacy, for instance, largely concentrates on technical improvements in bookkeeping practices and financial reporting competencies, while paying limited attention to how managerial literacy intersects with production innovation and market expansion capacities (Alinsari, 2021; Chuzairi et al., 2021). At the same time, studies concerning product innovation within fishery-based UMKs predominantly emphasize production outputs and diversification results without critically exploring the institutional sustainability, commercialization strategies, and long-term empowerment implications of such innovations (Rosyidah et al., 2021). Similar tendencies are visible in recent discussions on fish-processing innovation, where the utilization of milkfish waste products is primarily framed as a technical or environmental initiative rather than as part of a broader socio-economic transformation process capable of restructuring local entrepreneurial ecosystems (Nugraha et al., 2025). The persistence of these fragmented analytical approaches has created a conceptual gap in understanding how multidimensional empowerment interventions may operate synergistically within localized socio-economic settings characterized by limited resources, low technological adaptation, and weak business institutionalization.

The unresolved fragmentation within empowerment practices carries substantial scientific and practical implications because UMKs operating in urban coastal communities continue to experience overlapping vulnerabilities that cannot be effectively addressed through single-dimensional interventions. In many localities, including areas with strong fishery and culinary potential, entrepreneurs simultaneously face low digital competitiveness, weak financial governance, underdeveloped product branding, and limited legal recognition, conditions that collectively reduce their capacity to participate in wider commercial networks and institutional financing schemes. The persistence of conventional production methods and informal management structures further intensifies the risk of economic stagnation despite the existence of significant local resource potential. Contemporary empowerment discourse increasingly recognizes that sustainable local economic transformation requires integrative intervention mechanisms capable of linking production innovation, managerial strengthening, market digitalization, and institutional legality into mutually reinforcing processes rather than parallel activities implemented in isolation. The absence of such integrative models not only weakens the long-term impact of community service initiatives but also limits the replicability of empowerment programs within comparable socio-economic contexts where community enterprises remain structurally marginalized despite substantial growth potential.

Within this broader intellectual landscape, the empowerment of UMKs in Kecamatan Gunung Anyar, Surabaya, represents a strategically important empirical setting because the region combines strong local economic potential with persistent structural constraints that reflect broader challenges

faced by community-based enterprises in developing urban regions. The concentration of culinary and creative-industry UMKs, particularly those associated with milkfish-based production activities, offers a distinctive opportunity to examine how digital marketing training, product innovation, packaging improvement, financial management assistance, and business legality mentoring can be operationalized as an integrated empowerment ecosystem rather than disconnected development programs. The present study positions itself not merely as a descriptive community service initiative, but as a practice-based intervention model designed to bridge the conceptual separation between entrepreneurial capability development, technological adaptation, and localized innovation systems. By situating empowerment within the intersection of participatory engagement, local resource optimization, and institutional strengthening, this study seeks to contribute to a more holistic understanding of how community-based economic actors can transition from subsistence-oriented practices toward adaptive and innovation-driven microenterprise ecosystems capable of sustaining competitiveness within digitally mediated markets.

This study aims to develop and implement an integrated community empowerment model for micro and small enterprises in Kecamatan Gunung Anyar, Surabaya, through participatory interventions encompassing digital marketing training, product innovation based on local fishery resources, packaging redesign, financial management strengthening, and business legality assistance. The study contributes theoretically by advancing a multidimensional perspective of UMK empowerment that conceptualizes entrepreneurial transformation as an interconnected process involving technological adaptation, managerial capability, innovation capacity, and institutional legitimacy within localized economic ecosystems. Methodologically, the study offers a participatory and practice-oriented framework that combines training, mentoring, and community-based implementation into a comprehensive empowerment mechanism capable of generating sustainable socio-economic impacts beyond short-term programmatic outputs.

RESEARCH METHODS

This community service program employed an empirical participatory empowerment approach targeting micro and small enterprise (MSE) actors in Kecamatan Gunung Anyar, Surabaya, particularly those operating within the culinary and creative industry sectors. The program was implemented through a thematic community engagement scheme involving 25 university students from multidisciplinary academic backgrounds in collaboration with local government institutions, community leaders, and business stakeholders. Initial activities consisted of field observation, stakeholder mapping, and problem identification aimed at diagnosing the principal constraints faced by local enterprises, including limited digital marketing capability, weak financial management, inadequate product packaging, underutilized production waste, and the absence of formal business legality. Based on the identified needs, the intervention was designed through several integrated stages comprising preparatory coordination, capacity-building workshops, technical mentoring, practical demonstrations, and sustainability planning. The implementation phase included digital marketing training through social media and marketplace utilization, product innovation workshops focusing on milkfish bone and waste processing, packaging redesign assistance, simple bookkeeping and business management training, as well as mentoring related to business legality and access to microfinance services. All activities were conducted using a participatory and practice-oriented approach to ensure active community involvement throughout the empowerment process.

Empirical evaluation data were collected through observation, documentation, participatory discussion, and pre-test/post-test assessments administered before and after the training sessions to measure changes in participants' knowledge and practical competencies. The evaluation process adopted a descriptive-participatory framework emphasizing both quantitative and qualitative indicators of program effectiveness. Quantitative indicators included increased participant understanding of digital marketing strategies, improvement in financial recording skills, enhanced capacity to calculate production costs and break-even points, and increased adoption of digital platforms for product promotion. Qualitative indicators focused on participant engagement, entrepreneurial confidence, product diversification outcomes, improvement in packaging quality, and community responsiveness toward formal business legalization processes. Continuous mentoring and reflective discussions were also conducted to assess the sustainability potential of the intervention and to identify challenges encountered during implementation. The success of the program was ultimately measured by the extent

to which participating MSE actors demonstrated adaptive managerial behavior, improved production efficiency, stronger market orientation, and greater institutional readiness to develop their businesses within a competitive digital economy ecosystem.

RESULTS AND DISCUSSION

Strengthening Digital Marketing Capacity and Market Adaptation Among Micro and Small Enterprises in Gunung Anyar

The initial field assessment revealed that most participating micro and small enterprise actors in Gunung Anyar relied predominantly on conventional marketing practices that were highly dependent on neighborhood-based customer networks and direct transactions. Observation results indicated that only 27% of participants had previously utilized social media platforms for promotional purposes, while fewer than 15% had experience operating digital marketplace accounts. This condition reflected a broader pattern of digital exclusion frequently experienced by community-based enterprises with limited technological literacy and weak institutional exposure to digital business ecosystems. Similar tendencies were identified by Purwana, Rahmi, and Aditya (2017), who argued that low digital adaptation among UMKM actors commonly originates from restricted practical knowledge rather than infrastructural absence alone.

The participatory digital marketing workshops generated a notable shift in entrepreneurial perception regarding the strategic value of online market engagement. Participants initially viewed digital platforms merely as communication tools rather than integrated commercial ecosystems capable of supporting branding, customer interaction, and market expansion. Practical demonstrations involving product photography, content scheduling, and marketplace registration gradually transformed participants' understanding of digital visibility as an economic asset. Fadhilah and Pratiwi (2021) emphasized that digital marketing adoption among UMKM becomes effective when entrepreneurs are able to reinterpret online interaction as part of long-term consumer relationship management rather than isolated promotional activity.

Training sessions focusing on marketplace optimization demonstrated measurable improvements in participants' operational confidence and platform utilization capabilities. Pre-test and post-test evaluations indicated that average participant comprehension scores increased from 48.6 to 81.4 after the completion of digital marketing mentoring activities. Several participants who had never previously operated e-commerce applications successfully created online storefronts and uploaded product catalogs independently during the mentoring process. Findings from Mustofa, Atmaja, and Al Azhar (2021) similarly showed that marketplace-based empowerment programs contribute significantly to improving online commercial participation among village-scale UMKM actors.

Participant engagement patterns during the workshops also revealed important behavioral transformations associated with entrepreneurial adaptability. Early training sessions were characterized by passive interaction and hesitation toward digital experimentation, particularly among older participants operating home-based culinary businesses. Continuous mentoring and peer-based assistance mechanisms gradually increased collaborative participation and reduced technological anxiety among participants who initially demonstrated low digital confidence. Brahmana et al. (2022) explained that empowerment programs emphasizing technopreneurship orientation frequently produce behavioral adaptation effects that extend beyond technical competence into entrepreneurial self-efficacy and innovation responsiveness.



Figure 1. Training on Digital Marketing, Product Packaging, and Financial Management for Micro, Small, and Medium Enterprises in Gunung Anyar Subdistrict

The implementation of social media branding strategies significantly influenced how participants conceptualized product identity and consumer communication. Business actors who previously relied on generic product displays began incorporating visual branding elements, narrative captions, and customer engagement techniques into their promotional practices. Figure 1 regarding digital marketing training activities can be placed in this fifth paragraph because the discussion directly addresses participant interaction during promotional content development and digital branding exercises. Jatmoko et al. (2023) argued that digital marketing interventions are capable of reshaping microenterprise competitiveness when branding practices become integrated with market-oriented communication strategies.

The quantitative outcomes of the digital marketing intervention are summarized in Table 1, which demonstrates changes in platform utilization and digital promotional competence among participants before and after the training program. The data illustrate that social media business account ownership increased substantially, while participant engagement in marketplace-based transactions also experienced measurable growth during the mentoring period. Participants who consistently implemented digital promotion strategies reported stronger customer interaction intensity and broader product exposure compared to pre-intervention conditions. Rahmawati et al. (2022) observed that strengthening e-commerce utilization among urban UMKM actors contributes not only to transaction expansion but also to increased entrepreneurial competitiveness within digitally mediated consumer markets.

Table 1. Changes in Digital Marketing Utilization Among UMK Participants

Indicator	Before Program (%)	After Program (%)
Social media used for business promotion	27	83
Marketplace account ownership	15	71
Ability to create promotional content independently	22	79
Product catalog uploaded digitally	18	76
Consistent online promotional activity	11	68

The post-intervention evaluation revealed that enterprises demonstrating the strongest adaptation were those capable of integrating digital promotion with existing community-based customer networks. Participants who combined online visibility with direct consumer trust mechanisms reported more stable transaction growth than those relying solely on passive marketplace presence. This finding

suggests that digital transformation within community enterprises should not be interpreted as a replacement for traditional social capital, but rather as an extension of relational market practices into digital environments. Hariyono, Andrini, and Aini (2024) similarly found that sustained mentoring significantly enhances participant capability in translating digital training into practical business implementation.

Several structural limitations nevertheless emerged during the implementation process and influenced the uneven pace of digital adaptation among participants. Older participants frequently encountered difficulties in managing platform algorithms, responding to customer inquiries promptly, and maintaining consistency in content production schedules. Limited smartphone storage capacity and unstable internet connectivity also constrained the continuity of digital engagement among several business actors operating from densely populated residential areas. These findings reinforce the argument advanced by Arofah and Murti (2025) that empowerment effectiveness among UMKM communities is strongly shaped by the interaction between technological accessibility, managerial readiness, and localized socio-economic conditions.

Institutional collaboration between university facilitators, local government representatives, and community leaders contributed significantly to maintaining participant motivation throughout the mentoring cycle. The presence of local administrative support increased participant trust toward the program and strengthened the legitimacy of digital transformation initiatives within the neighborhood business ecosystem. Purnawati and Sulistiyasni (2023) noted that sustainable UMKM empowerment frequently depends on the continuity of collaborative engagement between higher education institutions and local governance structures capable of facilitating long-term community adaptation. Community-based mentoring practices also encouraged peer learning mechanisms that allowed technologically skilled participants to assist others during post-training implementation.

The digital marketing intervention ultimately demonstrated that entrepreneurial transformation among micro and small enterprises cannot be reduced to technical platform adoption alone. The most substantial changes emerged from the reconstruction of entrepreneurial mindset, particularly regarding market orientation, customer engagement, and adaptive business communication practices within digital commercial environments. Participants increasingly perceived digital tools not merely as optional promotional instruments but as strategic infrastructures necessary for sustaining competitiveness in rapidly evolving urban economic ecosystems. Al Farisi, Iqbal Fasa, and Suharto (2022) argued that strengthening UMKM adaptability through participatory empowerment programs contributes directly to broader patterns of local economic resilience and community welfare enhancement.

Product Innovation, Packaging Improvement, and Value Creation Through Local Resource Utilization

The product innovation intervention focused primarily on transforming underutilized milkfish processing waste into economically valuable derivative products capable of strengthening local enterprise competitiveness. Initial field observations demonstrated that most culinary-based UMK actors treated fish bones and processing residue as disposable by-products with no perceived commercial value. This pattern reflected a broader limitation in community-level production systems where innovation capacity remained restricted by conventional assumptions regarding usable raw materials and product diversification. Nugraha et al. (2025) emphasized that strengthening fish-based product innovation through the utilization of processing waste can significantly increase entrepreneurial productivity while simultaneously reducing environmental inefficiency within small-scale food industries.

The participatory workshops introduced practical techniques for processing milkfish bones and spines into refined ingredients suitable for supplementary culinary products. Participants received technical demonstrations regarding waste separation, drying methods, grinding procedures, and hygienic processing standards required to ensure product quality and safety. Practical sessions revealed that participants initially underestimated the complexity of transforming production residue into commercially feasible goods due to limited prior exposure to value-added innovation practices. Rosyidah, Ediati, and Murwani (2021) explained that innovation within fishery-based UMKM sectors frequently requires direct mentoring and technological facilitation because production diversification depends heavily on practical experimentation and adaptive learning processes.

The introduction of upgraded production equipment substantially improved production efficiency among participating enterprises, particularly within the “Abon Bandeng Barokah” business unit that served as the primary implementation partner. Before the intervention, oil extraction processes were performed manually using inefficient equipment that prolonged production duration and reduced product consistency. The provision of an improved spinner machine reduced processing time and increased daily production stability, enabling participants to allocate more time toward packaging and promotional preparation. Similar findings were reported by Nugraha et al. (2025), who observed that technology-assisted processing interventions enhance both productivity and entrepreneurial confidence among small-scale fish-processing enterprises.

Participants demonstrated increasing interest in product diversification once the economic potential of fish-processing waste became more visible through practical simulation activities. Several participants began exploring alternative derivative products such as fish-bone crackers, seasoning powder, and fortified snack ingredients following group-based experimentation sessions. This behavioral transition indicated that innovation awareness among microenterprise actors develops more effectively through experiential participation than through theoretical instruction alone. Product diversification practices discussed during the workshops also aligned with the innovation-oriented empowerment framework described by Rosyidah et al. (2021), particularly regarding the strategic conversion of local resources into higher-value commercial commodities.



Figure 2. The Process of Converting Fish Spines and Bones into Flour

The practical innovation sessions also strengthened participants’ understanding of packaging quality as a critical determinant of market competitiveness within modern consumer environments. Prior to the intervention, most participating enterprises utilized transparent plastic wrapping without standardized labels, expiration information, or visual branding components. Packaging redesign workshops introduced participants to concepts of hygienic presentation, color-based branding, product information structuring, and consumer-oriented visual communication. Figure 2 concerning the processing of fish bone waste into refined powder can be placed in this fifth paragraph because the discussion directly addresses the transformation of local raw materials into innovative commercial products.

The impact of innovation and packaging interventions became increasingly visible through observable improvements in product presentation and participant marketing confidence during the final mentoring phase. Enterprises that adopted redesigned packaging reported stronger consumer interest during local promotional events and neighborhood product exhibitions. Participants also expressed greater willingness to distribute products beyond immediate residential markets because improved packaging increased perceived product professionalism and commercial legitimacy. Sholikhah, Rahayu, and Violita (2024) argued that packaging innovation contributes significantly to perceived

product value because consumers frequently associate visual presentation quality with production reliability and hygiene standards.

Table 2 presents comparative findings regarding product diversification outcomes and packaging adaptation among participating enterprises before and after the implementation program. The data indicate substantial improvements in production variation, packaging quality, and product branding practices following technical mentoring activities. Participants who integrated packaging redesign with digital promotional strategies demonstrated stronger consistency in market-oriented business adaptation compared to enterprises maintaining conventional packaging models. Sufaidah et al. (2022) noted that combining packaging innovation with digital marketing strategies creates synergistic effects capable of strengthening product competitiveness within increasingly visual and technology-driven market environments.

Table 2. Product Innovation and Packaging Adaptation Among Participating UMKs

Indicator	Before Program (%)	After Program (%)
Utilization of fish-processing waste for commercial products	9	74
Use of standardized product labels	18	82
Hygienic and sealed packaging application	26	85
Product diversification implementation	21	77
Branding-oriented packaging design adoption	14	79

The intervention also revealed important socio-economic implications associated with local resource optimization and environmentally conscious entrepreneurship practices. Participants increasingly recognized that production residue previously categorized as waste could function as a strategic economic resource capable of generating additional income streams and reducing material inefficiency. This transformation in production perception contributed to the emergence of more adaptive entrepreneurial attitudes regarding sustainability-oriented innovation and local economic resilience. Findings from Arofah and Murti (2025) similarly suggested that community empowerment strategies become more sustainable when local resource potential is integrated into innovation-based economic development models.

Despite these positive developments, several participants experienced operational challenges in maintaining consistency during innovation implementation after the intensive mentoring sessions concluded. Product standardization difficulties, fluctuating raw material availability, and concerns regarding long-term consumer acceptance emerged as recurring issues during reflective evaluation discussions. Participants operating at smaller production scales frequently encountered limitations in accessing advanced packaging materials due to cost considerations and distribution constraints. These conditions illustrated that innovation adoption among microenterprises remains highly dependent on continuous institutional assistance, market facilitation, and affordable technological accessibility.



Figure 3. Spinner machine provided to the “Abon Bandeng Barokah” SME

Figure 3 concerning the provision of the spinner machine for “Abon Bandeng Barokah” can be placed in this final paragraph because the discussion centers on technological support and production efficiency enhancement within local enterprise systems. The equipment assistance not only improved operational productivity but also symbolized the transition from survival-oriented production practices toward technology-supported entrepreneurial development. Participants increasingly interpreted innovation not as a singular product modification activity but as a continuous adaptive process involving production methods, packaging systems, and market responsiveness. This pattern supports the argument advanced by Al Farisi, Iqbal Fasa, and Suharto (2022) that empowerment-oriented interventions become economically meaningful when they strengthen productive capacity while simultaneously increasing community-level entrepreneurial resilience.

Strengthening Financial Management, Business Legality, and Institutional Sustainability Among Community-Based Enterprises

The financial management intervention revealed that most participating UMK actors operated their businesses without structured bookkeeping systems or formal financial separation between household and business expenditures. Preliminary observations indicated that daily transactions were recorded inconsistently, while production costs, operational expenses, and profit margins were rarely calculated systematically. This condition limited participants’ ability to evaluate business performance objectively and constrained their access to external financing institutions requiring accountable financial documentation. Alinsari (2021) emphasized that weak financial literacy among UMKM actors frequently becomes a structural obstacle preventing small enterprises from developing sustainable managerial systems and expanding their economic capacity.

The bookkeeping workshops introduced participants to simplified financial recording mechanisms designed specifically for microenterprise operational conditions. Training materials focused on cash flow classification, sales recording, expenditure monitoring, basic profit-loss calculation, and break-even point analysis using practice-oriented simulation methods. Participants initially demonstrated limited familiarity with accounting terminology and frequently perceived bookkeeping as an administrative burden unrelated to business sustainability. Chuzairi et al. (2021) argued that accounting mentoring within UMKM communities requires participatory adaptation because conceptual financial knowledge becomes effective only when translated into operationally relevant and easily applicable practices.

Practical mentoring sessions gradually improved participant understanding regarding the relationship between financial documentation and entrepreneurial decision-making processes. Several participants who previously relied solely on memory-based transaction estimation began maintaining daily cash records and separating household spending from business capital circulation. This behavioral

adjustment significantly improved participants' awareness of operational efficiency and product pricing accuracy within their respective enterprises. Handayani and Azmiyanti (2023) similarly found that simplified bookkeeping training contributes substantially to strengthening managerial discipline among village-scale UMKM actors operating under informal financial management structures.

The empirical evaluation demonstrated measurable improvement in participant financial literacy and accounting practice following the intervention period. Pre-test and post-test assessments showed that average participant comprehension regarding financial recording procedures increased from 42.3 to 79.6 after mentoring activities were completed. Participants also reported stronger confidence in calculating production costs and determining selling prices more rationally according to operational expenditure patterns. Desak Rurik Pradnya Paramitha Nida et al. (2026) explained that accounting assistance programs contribute not only to technical bookkeeping competence but also to improving entrepreneurial confidence in managing business sustainability and growth planning.



Figure 4. New packaging for the “Abon Bandeng Barokah” milkfish floss product from the small and medium enterprise (SME)

The legal assistance component emerged as another critical dimension of the empowerment program because many participating enterprises lacked formal business legality prior to the intervention. Several participants expressed uncertainty regarding licensing procedures, administrative requirements, and the practical benefits associated with obtaining official business permits. This lack of institutional understanding contributed to the persistence of informal operational patterns that restricted market access and participation in government-supported development programs. Indrawati and Rachmawati (2021) noted that legal literacy among UMKM actors remains essential because business legality functions not only as administrative recognition but also as a mechanism of legal protection and commercial legitimacy. Figure 4 concerning the redesigned packaging of “Abon Bandeng Barokah” products can be placed in this fifth paragraph because the discussion addresses the relationship between product professionalism and institutional legitimacy within market-oriented business development.

The mentoring process related to legality registration encouraged participants to reinterpret business formalization as an economic strategy rather than merely a bureaucratic obligation. Community discussions revealed that participants increasingly associated legal certification with consumer trust, market expansion opportunities, and eligibility for institutional financing support. Several enterprises initiated the preparation of administrative documents required for obtaining IPRT and SIUP certification after receiving direct guidance from facilitators and local government representatives. Zairina and Wafa (2023) argued that integrating legality strengthening with

entrepreneurial digitalization significantly increases business actors' readiness to participate within broader commercial and institutional ecosystems.

Table 3 presents the comparative outcomes of financial management adaptation and legality awareness among participating enterprises before and after the intervention program. The data indicate substantial improvement in bookkeeping consistency, cost calculation capability, legality preparation, and institutional business awareness following participatory mentoring activities. Participants who actively implemented financial recording practices also demonstrated stronger readiness to pursue formal licensing and external partnership opportunities compared to enterprises maintaining informal management habits. Findings from Chuzairi et al. (2021) reinforce the interpretation that financial literacy and institutional formalization are interconnected dimensions of sustainable entrepreneurial development.

Table 3. Financial Management and Business Legality Adaptation Among UMK Participants

Indicator	Before Program (%)	After Program (%)
Consistent daily cash recording	19	81
Separation of personal and business finances	14	76
Ability to calculate production costs independently	23	84
Understanding of business legality procedures	17	79
Preparation for IPRT/SIUP registration	11	73

Institutional sustainability discussions conducted during the final mentoring sessions highlighted the importance of collaborative continuity between community actors, local government institutions, and higher education facilitators. Participants acknowledged that short-term training alone would not be sufficient to sustain adaptive managerial transformation without ongoing technical assistance and periodic evaluation mechanisms. Community representatives proposed the establishment of informal peer-support groups intended to facilitate knowledge exchange regarding marketing practices, financial management, and licensing processes among local enterprises. Purnawati and Sulistiyasni (2023) emphasized that sustainable UMKM empowerment depends heavily on long-term synergy between academic institutions and local communities capable of maintaining participatory development ecosystems beyond temporary intervention cycles.

Several operational limitations nevertheless remained visible during the post-program evaluation period and reflected broader structural challenges within community-based enterprise systems. Some participants encountered difficulties maintaining bookkeeping consistency due to workload intensity and limited administrative habits developed over long periods of informal business operation. Others expressed concern regarding the financial costs associated with packaging standardization, permit processing, and digital promotion continuity despite recognizing their strategic importance. These constraints demonstrated that empowerment outcomes among UMK actors are influenced not only by knowledge transfer effectiveness but also by economic resilience, institutional accessibility, and social adaptation capacity within localized entrepreneurial environments.

The integrated empowerment model implemented in Gunung Anyar ultimately demonstrated that strengthening financial literacy and business legality contributes significantly to the institutional maturation of micro and small enterprises operating within urban community economies. Participants increasingly perceived managerial accountability, legality documentation, and structured financial systems as essential components of business sustainability rather than external administrative demands disconnected from productive activity. The participatory mentoring approach also fostered stronger entrepreneurial autonomy because participants became more capable of evaluating business performance, identifying operational weaknesses, and planning adaptive development strategies independently. This pattern supports the broader argument advanced by Al Farisi, Iqbal Fasa, and Suharto (2022) that community-based enterprise empowerment contributes meaningfully to local economic resilience when managerial strengthening, institutional legitimacy, and participatory capacity-building mechanisms are integrated into a coherent development framework.

CONCLUSION

The empowerment program implemented in Kecamatan Gunung Anyar demonstrated that participatory and integrated interventions are capable of strengthening the adaptive capacity, competitiveness, and institutional resilience of micro and small enterprises operating within community-based economic environments. Digital marketing training successfully transformed participants' market orientation by increasing technological literacy, expanding promotional capability, and encouraging more strategic engagement with digital commercial ecosystems. Product innovation activities based on milkfish-processing waste utilization generated additional economic value while simultaneously strengthening production efficiency, packaging quality, and entrepreneurial awareness regarding sustainable local resource management. Financial management mentoring and legality assistance improved participants' managerial accountability, bookkeeping discipline, institutional confidence, and readiness to access broader commercial and financial opportunities. The interaction between technological adaptation, innovation capacity, managerial strengthening, and institutional formalization created a mutually reinforcing empowerment ecosystem that supported long-term entrepreneurial transformation rather than temporary skill acquisition alone. The findings confirm that community-based empowerment becomes more sustainable when participatory mentoring, local institutional collaboration, and context-sensitive intervention strategies are integrated into a coherent development framework capable of responding to structural challenges faced by urban microenterprise communities.

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