



Empowering Coastal Communities Through Sustainable Economy and Adoption of Financial Technology in Bira Beach, South Sulawesi

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Abstract: Bira Beach in South Sulawesi is a leading coastal tourism destination with strong potential for local economic growth through micro, small, and medium enterprises (MSMEs). However, many MSMEs still face challenges related to limited digital literacy, product innovation, and understanding of sustainable business management. This community service program was designed to enhance MSME competitiveness, promote sustainable business practices aligned with the Sustainable Development Goals (SDGs), improve digital literacy, and foster collaboration among entrepreneurs, academics, and local government. Using participatory collaborative and descriptive methods, the program implemented a series of workshops, mentoring sessions, and field visits focusing on financial technology adoption, creative product innovation, and sustainable creative economy training. The results show an increased understanding of sustainable business concepts, greater readiness to adopt financial technology such as QRIS and e-wallets, and enhanced digital marketing capabilities among MSME participants. The program also encouraged stronger cooperation between MSMEs and local stakeholders to support long-term independence and sustainable community-based economic development in the Bira Beach area.



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Introduction

Indonesia is known for its natural beauty, which is reflected in several of its leading tourist destinations. One of these leading tourist destinations is located on the coast of

South Sulawesi. This beach is known for its soft white sand and attractive marine tourism potential. This beauty makes it one of the most popular tourist destinations. Bira Beach not only offers unforgettable recreational experiences but also holds significant economic potential for the surrounding community ¹. Therefore, this area presents a strategic opportunity to integrate tourism with the development of micro, small, and medium enterprises (MSMEs).

In the tourism sector, MSMEs are not only drivers of the local economy but also authentic representatives of cultural values, traditions², and local wisdom³, which are the main attractions for tourists. Various types of MSMEs, such as culinary, accommodation (homestays), handicrafts, and tour guide services, play a significant role in supporting the overall tourism ecosystem ^{4 5}. The Bulukumba Tourism and Creative Economy Office noted that tourist visits to Bira Beach have increased ⁶.

The increase in the number of tourists should align with an increase in the capacity and well-being of SMEs in the area. However, on-the-ground conditions indicate that SME operators in the Bira Beach area still face several fundamental challenges in optimizing this potential. Some of these obstacles include a lack of managerial skills and limitations in product innovation ⁷. Additionally, it is important to raise awareness of sustainable

¹ Mardiana E Fachry, "Maritime Tourism Supports Improved Welfare of Coastal Communities in South Sulawesi," *Jurnal Torani* 5, no. 12 (2021): 16-28., [http://pakdosen.unhas.ac.id/storage/dokumen/turnitin-1662627826-19083-Article Text-59365-1-10-20211221 \(3\).pdf](http://pakdosen.unhas.ac.id/storage/dokumen/turnitin-1662627826-19083-Article Text-59365-1-10-20211221 (3).pdf).

² Rahmania Zuhuda et al., "Kearifan Lokal Sebagai Sumber Inspirasi Dalam Pengembangan Produk Wisata Budaya Kreatif," *Journal Of Social Science Research* 5, no. 3 (2025): 2089-2100, <https://doi.org/https://doi.org/10.31004/innovative.v5i3.19289>.

³ Dina Rosari, "Pemanfaatan UMKM Kuliner Lokal Dan Kearifan Lokal Dalam Pengembangan Desa Wisata Berkelanjutan: Studi Kasus Di Desa Buluh Duri, Serdang Bedagai, Sumatera Utara," *Jurnal Manajemen Pendidikan Dan Ilmu Sosial* 6, no. 2 (2025): 1054-60, <https://doi.org/10.38035/jmpis.v6i2.3929>.

⁴ Khalisah Visiana, "The Role of Women in Community Economic Empowerment and Tourism through Women's Knowledge-Based MSMEs," *Saudi Journal of Business and Management Studies* 10, no. 02 (2025): 64-74, <https://doi.org/10.36348/sjbms.2025.v10i02.001>.

⁵ Heny Ratnaningtyas, Michael Khrisna Aditya, and Pricilia Johani Sakti, "The Role of MSMEs in Increasing Visits in Cisoka Blue Lake, Tangerang Regency, Banten Province, Indonesia," *International Journal of Management and Economics Invention* 11, no. 01 (2025): 3813-18, <https://doi.org/10.47191/ijmei/v11i1.03>.

⁶ "Kenaikan Kunjungan Wisatawan Di Objek Wisata Tanjung Bira Menjadi Sorotan Positif," Disparpora Bulukumba, 2024, <https://disparpora.bulukumbakab.go.id/2024/09/17/kenaikan-kunjungan-wisatawan-di-objek-wisata-tanjung-bira-menjadi-sorotan-positif/>.

⁷ Rina Asrini Bakri et al., "Integrasi Kearifan Lokal Dalam Upaya Optimalisasi Ekowisata Di Pantai Bira: Menuju Summit Tourism Investment 2023," *Madaniya* 4, no. 4 (2023): 1795-1801, <https://www.madaniya.pustaka.my.id/journals/contents/article/view/598%0Ahttps://www.madaniya.pustaka.my.id/journals/contents/article/download/598/441>.

business practices that consider social⁸, economic⁹, and environmental factors¹⁰. In his findings, Abrori states that business actors often prioritize short-term financial gains over long-term impacts on the environment and resource sustainability¹¹. Therefore, it is necessary to apply the principles of sustainable economics to their business practices.

Furthermore, the rapid development of the digital era requires MSME players to adapt quickly and appropriately. However, among the coastal communities of Bira Beach, the use of digital technology for marketing, promotion, and transactions remains very limited. This limitation is not merely a matter of access, but also reflects deeper structural challenges, such as low levels of digital and financial literacy, inadequate infrastructure, and a strong dependence on conventional trading practices inherited through generations¹²¹³. These communities typically engage in small-scale businesses such as tourism services, seafood trading, and handicrafts that rely heavily on face-to-face interactions and informal financial systems¹⁴.

Limited exposure to digital platforms and minimal understanding of fintech tools, such as QRIS and digital wallets, have prevented these business actors from optimizing opportunities for innovation and market expansion¹⁵. Yet, this also represents a substantial potential for empowerment. With targeted training and digital literacy programs, the community could enhance their competitiveness, reach wider markets, and manage finances more transparently¹⁶¹⁷. Strengthening digital adaptation is therefore

⁸ Eman Diantoro, Bambang Arianto, and Suheri, "Studi Fenomenologi Konsep Bisnis Berkelanjutan Dalam Konteks Pegiat UMKM," *Jurnal Manajemen Strategis: Jurnal Mantra* 1, no. 2 (2024): 127–44, <http://dx.doi.org/10.30588/jmt.v1i02.2091>.

⁹ Dyah Yuni Kurniawati et al., "Pengembangan UMKM Berkelanjutan: Pemanfaatan Ekonomi Lokal Dan Teknologi Dalam Pengolahan Limbah Untuk Pertumbuhan Ekonomi Dan Lingkungan Desa Kayuapak," *SWARNA: Jurnal Pengabdian Kepada Masyarakat* 3, no. 3 (2024): 309–18, <https://doi.org/10.55681/swarna.v3i3.1265>.

¹⁰ Daniar Wulan Aura Rahma et al., "Strategi Perencanaan Dan Pengembangan Bisnis Berkelanjutan," *Jurnal Pengabdian Kepada Masyarakat* 4, no. 1 (2024): 186–97.

¹¹ "Penerapan Etika Bisnis Islam Dalam Praktik Usaha Mikro Di Indonesia," *Madinah: Jurnal Studi Islam* 11, no. 2 (2024): 345–58, <https://doi.org/10.58518/madinah.v11i2.3085>.

¹² Abubakar and Handayani, "The Role of Digital Literacy in Empowering Coastal Communities: Evidence from Indonesia's Micro and Small Enterprises," *Journal of Asian Development Studies* 10, no. 3 (2021): 45–59, <https://doi.org/https://doi.org/10.xxxx/jads.v10i3.234>.

¹³ D. P. Sari and Y Nugroho, "Empowering Coastal MSMEs through Digital Financial Inclusion: A Sustainable Community Development Approach," *Journal of Economics and Sustainable Development* 11, no. 9 (2020): 95–104, <https://doi.org/https://doi.org/10.xxxx/jesd.v11i9.98>.

¹⁴ Ariani and Haryanto, "Digital Transformation of MSMEs in Coastal Tourism Areas: Challenges and Opportunities in South Sulawesi," *Indonesian Journal of Community Engagement* 7, no. 2 (2022): 110–24, <https://doi.org/https://doi.org/10.xxxx/ijce.v7i2.1234>.

¹⁵ Triannisa Rahmawati and A D Putri, "Financial Technology Adoption and MSME Resilience during Digital Transformation: The Mediating Role of Digital Literacy," *Small Business International Review* 7, no. 1 (2023), <https://doi.org/https://doi.org/10.26784/sbir.v7i1.532>.

¹⁶ Bank Indonesia, *Digital Financial Literacy and Inclusion in Indonesia: Strengthening MSMEs through Fintech Adaptation* (Jakarta: Bank Indonesia Publishing, 2021).

¹⁷ World Bank, *Unlocking the Potential of MSMEs through Digitalization in Emerging Economies*. Washington (DC: World Bank Publications, 2022).

not only a response to technological change but also a strategic effort to increase resilience, inclusivity, and sustainability of coastal-based MSMEs in the long term.

This situation highlights a significant gap between the vast tourism potential and the actual capacity of SMEs in Bira Beach. Without planned and structured intervention, this economic opportunity risks being underutilized, while sustainability issues will continue to recur. Therefore, a holistic and comprehensive community service program is needed, one that does not focus on a single aspect of the problem but integrates various innovative approaches to generate effective and sustainable solutions. Thus, this program introduces innovation by integrating two approaches rarely combined in a single framework: sustainable economics and the adoption of financial technology.

This community service program focuses on empowering MSMEs operating in the food, handicraft, tourism, and accommodation sectors in the Bira Beach area. Given the community's reliance on tourism and traditional trade systems, these sectors hold strategic potential for sustainable economic growth. The program specifically targets local business actors and community members involved in the tourism economy, aiming to strengthen their capacity through mentoring and digital literacy development.

In alignment with the Sustainable Development Goals (SDGs), the program seeks to establish an integrated MSME mentoring model that promotes inclusive economic participation, environmental responsibility, and innovation. Through systematic training and assistance, the program aspires to enhance the managerial, digital, and financial literacy of MSME operators, enabling them to manage businesses that are resilient and sustainability-oriented. Another key outcome is the readiness of MSME products for digital marketing, ensuring broader market access beyond the local area. Additionally, the implementation of this program will produce comprehensive reports and scientific publications that contribute to the knowledge base of community empowerment practices.

METHOD

The implementation of this program adopts a participatory collaborative approach, emphasizing the active involvement of community members, local stakeholders, and facilitators in every stage of program design and execution. This approach has proven effective in promoting sustainable community-based development, as it encourages shared ownership, empowerment, and mutual learning among

participants¹⁸ ¹⁹. Collaboration enables the exchange of resources, expertise, and local knowledge, fostering innovation and sustainability in economic practices²⁰ ²¹.

To operationalize this participatory process, the program was structured based on the principles of Community-Based Participatory Research (CBPR), implemented through four sequential stages: (1) Problem Identification, conducted through Focus Group Discussions (FGDs) with MSME actors and local government representatives to map challenges and opportunities; (2) Program Planning, jointly formulated by the community and academic team; (3) Action and Training, consisting of workshops on sustainable creative economy, digital marketing, and financial technology (QRIS and e-wallets); and (4) Reflection and Mentoring, conducted through field visits and participatory observation to evaluate and refine program outcomes.

Data were collected through FGDs, interviews, and participatory observation, guided by discussion protocols focusing on financial management, digital literacy, and sustainability awareness. Qualitative data from discussions and interviews were analyzed using thematic analysis to identify patterns related to MSME empowerment, digital adaptation, and sustainability transformation. In addition, a descriptive approach was used to interpret the socioeconomic context and illustrate community conditions supporting or hindering financial technology adoption.

The implementation stages of this community service program were systematically structured to ensure active participation of all stakeholders, from initial problem identification to program evaluation. The following flowchart (Figure 1) illustrates the overall process of MSME empowerment in Bira Beach, highlighting the main activities, methods, and qualitative outcomes achieved at each stage.

¹⁸ J. N Pretty, "Participatory Learning for Sustainable Agriculture," *World Development* 23, no. 8 (1995): 1247–63, [https://doi.org/10.1016/0305-750X\(95\)00046-7](https://doi.org/10.1016/0305-750X(95)00046-7).

¹⁹ R Chambers, *Whose Reality Counts? Putting the First Last* (London: London: Intermediate Technology Publications, 1997).

²⁰ A Andri Ardhiyansyah, S Rahmawati, and M. Yusuf, "Collaborative Innovation in Sustainable Local Economic Development: Case Studies of Community-Based MSMEs in Indonesia," *Journal of Community Development Studies* 5, no. 1 (2023): 23–35.

²¹ R Tennyson, *The Partnering Toolbook: An Essential Guide to Cross-Sector Partnering* (London: The Partnering Initiative, 2011).

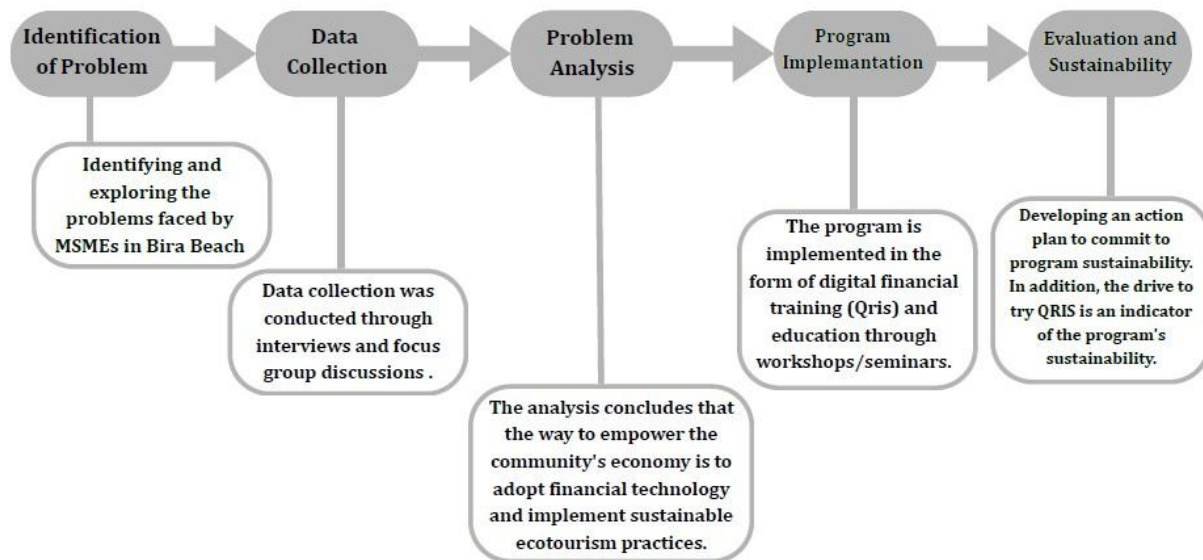


Figure 1. Flow of the MSME Empowerment Program in Bira Beach

As shown in Figure 1, the empowerment process follows a continuous cycle of reflection and action typical of community-based participatory programs. Each stage contributes to a deeper understanding of local needs, collaborative problem-solving, and the development of sustainable economic practices. This cyclical and participatory structure ensures that the knowledge generated during the program remains embedded in the community, supporting long-term MSME resilience and self-reliance.

1. Identification of Problems

This stage focuses on identifying and exploring the problems faced by coastal communities in Bira Beach. Based on reports, the main problems identified are a lack of financial literacy and digital technology utilization among micro-businesses, particularly in the context of tourism. Although Bira Beach has great ecotourism potential, the local community has not fully utilized technologies such as fintech (financial technology) to manage finances, expand markets, and increase turnover.

2. Data Collection

At this stage, the implementation team collected data to gain a deeper understanding of the issues that had been identified. Data collection was carried out through Focus Group Discussions (FGDs), participatory observation, and documentation. This approach aimed to produce an integrated MSME assistance model that combines the principles of sustainable economy and financial technology while providing strategic recommendations for the sustainable development of MSMEs in Bira Beach.

3. Problem Analysis

After the data is collected, the team conducts an analysis to formulate the most appropriate solutions. This analysis leads to the conclusion that one way to empower the community's economy is to adopt financial technology and implement sustainable ecotourism practices. In addition, the development of ecotourism is also a focus to ensure that tourism is sustainable and provides long-term benefits to the community.

4. Program Implementation

At this stage, all planned programs were implemented, including various training and education sessions. The implementation team provided training on digital finance and introduced a simple financial record-keeping application. In addition, education on sustainable ecotourism was also conducted, accompanied by discussion and question-and-answer sessions to explore the experiences and challenges faced by the community.

5. Evaluation and Sustainability

This final stage aims to assess the success of the program and formulate the next steps. The report highlights the importance of separating personal and business money, recording daily transactions, and using simple financial recording applications. In addition, the encouragement to try QRIS is an indicator of the program's sustainability. This sustainability is highly dependent on the active participation of the community in applying the knowledge they have gained.

Results

Before the implementation of the community service program, the economic activities around Bira Beach, Bulukumba Regency, South Sulawesi, were primarily driven by micro and small enterprises engaged in the culinary, handicraft, lodging, and marine tourism sectors. Although the area has strong potential for sustainable coastal tourism, local businesses faced persistent barriers such as limited digital literacy, inadequate capital, and a lack of understanding of sustainable business practices. Infrastructure and internet access were uneven, restricting their ability to connect with broader digital markets and financial platforms. These baseline conditions provided the foundation for the program's intervention, which sought to strengthen MSME competitiveness and adaptability through digital empowerment, innovation, and collaboration with local stakeholders.

The implementation of the program produced several interrelated outcomes that reflect progress in MSME empowerment, innovation, and collaboration. A summary of the program's thematic activities and corresponding results is presented in table below:

Thematic Outcome	Key Activities	Observed Results/Impact
Sustainable Creative Economy Awareness	<ul style="list-style-type: none"> • Session 1: Sustainable Creative Economy • FGD on Mapping MSME Potential and Challenges 	Participants gained a deeper understanding of how to identify and transform local resources into creative and environmentally responsible products. The FGDs also revealed key constraints such as limited marketing reach, low capital, and dependence on raw materials, providing direction for tailored interventions.
Digital Empowerment and Financial Technology Adoption	<ul style="list-style-type: none"> • Session 2: Financial Technology for MSMEs • On-Site Visits to MSME Locations 	Participants improved their digital literacy and readiness to adopt financial technology tools. During mentoring, they successfully registered and simulated transactions using QRIS and digital wallets, marking an initial transition from cash-based to digital operations despite technical barriers.
Digital Marketing and Business Integration	Workshop on Integration and Digital Marketing	Participants learned to integrate fintech solutions into marketing strategies and practiced promoting their products through social media while including digital payment options, enhancing visibility and transaction efficiency.
Sustainability Planning and Entrepreneurial Commitment	Action Plan Development Workshop	Each participant developed a concrete action plan outlining follow-up strategies for business sustainability, reflecting

increased commitment to applying sustainable and technology-oriented practices after the program.

Table 1. Thematic Summary of Program Activities and Outcomes

As shown in the table, the intervention produced transformative learning outcomes rather than isolated training effects. MSME actors not only gained new knowledge about sustainable and digital business practices but also demonstrated behavioral change through the adoption of financial technology, development of creative products, and formulation of sustainability-oriented business plans. These results reflect the success of the participatory empowerment approach in fostering long-term readiness and adaptability among coastal entrepreneurs in Bira Beach.

Building on the activities summarized in Table 1, the empowerment program produced visible improvements in participants' awareness, skills, and confidence. Through a combination of workshops, mentoring, and field visits, MSME actors deepened their understanding of sustainable creative economy principles, improved their digital literacy, and began adopting financial technology tools such as QRIS and e-wallets. Participants also learned to integrate digital payments into product marketing and to design practical action plans for continued business development. Collectively, these experiences illustrate a transition from conceptual learning to applied digital and sustainability practices among MSME participants.

Enhancing the Capacity and Competitiveness of MSMEs

MSMEs in the Bira Beach area form the backbone of the local coastal economy, with strong potential in the culinary, handicraft, lodging, and tourism service sectors. Nevertheless, their development has long been constrained by limited access to capital, low levels of digital literacy, and insufficient exposure to modern business and marketing strategies. To address these challenges, the community service program implemented an integrated empowerment initiative focused on enhancing MSME capacity and competitiveness through sustainable creative economy training and the adoption of digital financial technology.

The empowerment process combined workshop-based learning, product innovation mentoring, and the introduction of financial technology such as QRIS and e-wallet applications. These activities were reinforced through on-site guidance and Focus Group Discussions (FGDs) that enabled MSME actors to identify opportunities for local product development, improve marketing strategies, and adopt digital tools for business transactions. The digital marketing component emphasized the use of social media particularly TikTok as an accessible promotional platform for small enterprises with limited budgets.

The program outcomes indicated notable improvements in participants' capacity to innovate products rooted in local wisdom, adopt digital payment systems, and manage their businesses more systematically and sustainably. Participants reported increased confidence in expanding market reach via online channels and integrating digital solutions into daily operations, demonstrating a shift from informal practices toward more professionalized business management. However, persistent barriers such as limited capital for investment, uneven telecommunications infrastructure, and the need for sustained mentoring remain significant constraints. Addressing these issues requires continued support from local government, strengthened partnerships with tourism stakeholders, and ongoing capacity-building initiatives to consolidate gains and ensure long-term competitiveness.

As part of the empowerment strategy, the team conducted training sessions on sustainable creative economy practices, focusing on identifying and developing environmentally responsible products based on local resources. This session (Figure 2) encouraged participants to reflect on their unique cultural assets and explore innovative ways to increase product value while maintaining environmental awareness.



Figure 2. Training session on sustainable creative economy practices.

The session facilitated critical reflection among participants on how local resources and traditions can be transformed into creative, marketable, and environmentally responsible products, enhancing MSME innovation capacity and sustainability awareness.

Sustainable Business Practices (SDG Principles)

MSMEs in Bira Beach play a central role in advancing inclusive and sustainable local economic development. However, their business operations remain challenged by

limited resources, inadequate understanding of sustainability principles, and the suboptimal use of environmentally friendly technologies. To address these issues, the community service program was designed to integrate the principles of the Sustainable Development Goals (SDGs) into MSME business practices, aligning entrepreneurship with social inclusion and environmental stewardship^{22 23}. The relevance of the program to the SDGs is illustrated in Figure 3, which maps how each empowerment component contributes to specific sustainability objectives targeted during implementation.



Figure 3. Relevance of the MSME Empowerment Program to the Sustainable Development Goals (SDGs)

The program aligns with key SDG targets by linking MSME empowerment to poverty reduction (SDG 1), inclusive growth (SDG 8), sustainable community development (SDG 11), responsible production and consumption (SDG 12), and collaborative partnerships (SDG 17).

Building upon this framework, the program provided practical learning opportunities that translated the SDG principles into daily business activities. Empowerment activities included training in the sustainable creative economy, mentoring on business management based on SDG principles, and guidance on waste reduction and resource efficiency. Through participatory workshops, MSME participants explored how sustainable production practices could enhance profitability while reducing environmental impact.

The discussions and exercises focused particularly on several SDGs: SDG 1 (reducing poverty through improved livelihoods), SDG 8 (fostering inclusive and

²² Anisa Apriani et al., "Keuangan Mikro Syariah Dan Tujuan Pembangunan Berkelanjutan: Menyelaraskan Prinsip Dengan Praktik," *Journal of Economics and Business* 2, no. 1 (2024): 99–108, <https://doi.org/10.61994/econis.v2i1.477>.

²³ Btari Mariska Purwaamijaya et al., "Penguatan UMKM Desa Binaan Berbasis SDGs Digital Di Santanamekar," *Jurnal Pengabdian Nasional (JPN) Indonesia* 6, no. 2 (2025): 345–54, <https://doi.org/10.63447/jpni.v6i2.1317>.

sustainable economic growth), SDG 11 (developing tourism areas as livable and resilient local economies), SDG 12 (encouraging responsible use of natural resources), and SDG 17 (strengthening partnerships among universities, MSMEs, government, and the private sector). By internalizing these principles, participants began to see sustainability not merely as compliance, but as a business strategy that adds long-term value and resilience.

The implementation of SDG-based business management was closely linked with the introduction of financial technology, as digital tools were seen as enablers of sustainable business efficiency and transparency. The integration of these two aspects is shown in Figure 4, which illustrates the socialization sessions on financial technology and the dissemination of SDG principles conducted during the program.



Figure 4. Training on Financial Technology and Socialization of Sustainable Development Goals (SDGs)

The session emphasized the connection between digital financial literacy and sustainability awareness, demonstrating how the use of financial technology (QRIS, digital wallets, and digital record-keeping) supports responsible production, transparent financial practices, and the empowerment of local entrepreneurs.

The results of these activities show that MSME participants developed stronger awareness and practical skills to apply sustainable business principles. This progress was reflected in changes in production and marketing behavior that give greater consideration to environmental and social impacts. Participants also began adopting innovations such as digital financial record-keeping and the use of fintech applications to improve operational efficiency and accountability. These outcomes demonstrate an

evolving understanding that sustainability and digitalization are mutually reinforcing strategies for long-term competitiveness.

Nonetheless, several challenges persist, including limited capital for investing in environmentally friendly facilities, uneven infrastructure, especially internet connectivity, and the need for continued mentoring to ensure that sustainable practices are maintained. Ongoing collaboration among local government, universities, and tourism stakeholders is therefore essential to consolidate these early gains and embed sustainability as a core business principle among coastal MSMEs.

Digital Literacy and MSME Product Innovation

MSME actors in Bira Beach face persistent challenges in adapting to the digital era and fostering product innovation. To address these issues, the Community Service Team implemented an empowerment program that emphasizes digital literacy development and innovation grounded in local wisdom. The program was carried out through collaboration among various stakeholders, including local government representatives, MSME associations, tourism operators, and university facilitators with prior professional experience in financial institutions providing fintech education. This multi-stakeholder synergy ensured that the mentoring process was contextually relevant and sustainable.

The integration of digital technology in MSME business operations was further strengthened through field-based mentoring and fintech training sessions, which encouraged participants to adopt digital payment systems and online marketing tools. These sessions are illustrated in Figure 5.



Figure 5. Socialization and training on the use of financial technology.

The activity demonstrated the practical adoption of digital payment tools such as QRIS and e-wallets, reinforcing participants' digital literacy and ability to integrate financial technology into their daily business transactions.

The empowerment activities consisted of training on the use of financial technology (QRIS), creative economy workshops to stimulate product innovation, and personalized mentoring sessions on digital marketing and transaction management. On-site mentoring strengthened the transfer of practical skills, particularly in using digital applications and enhancing product creativity. Participants were trained to promote their products via social media and integrate digital payment systems through QRIS, thereby broadening their customer base and streamlining financial management.

The mentoring process produced transformative outcomes beyond improved digital literacy. MSME actors demonstrated measurable behavioral and managerial changes, such as consistent use of digital transactions, improved branding and packaging aligned with sustainability principles, and increased collaboration between entrepreneurs and local institutions. These outcomes indicate not only enhanced digital competence but also the emergence of a more innovative and resilient MSME ecosystem in the Bira Beach area.

Partnership between MSMEs, Academics, and Government

The implementation of the MSME empowerment program in Bira Beach involves synergy between business actors, academics, and the government to create an ecosystem that supports capacity building and competitiveness. This partnership emerged as a response to issues such as limited access to capital, digital literacy, and the implementation of sustainable business practices²⁴.

The Community Service Team provides intensive assistance through interviews and Focus Group Discussions (FGD) with MSME actors and village governments. The forms of partnership that have been realized include joint training with academics as resource persons and support from the government in terms of regulations and resources. Strategic partnerships are also established between MSMEs and stakeholders such as the tourism office and microfinance institutions. This includes the initiation of local regulations to facilitate business licensing and sustainable business incentives.

MSME development requires a combination of digital technology, local knowledge, and a sustainable economy. Improving digital literacy and the use of financial technology such as QRIS is important for efficiency and competitiveness. Through inclusive business practices, this collaborative strategy supports the achievement of SDGs and strengthens the local business ecosystem.

²⁴ Asep Abdurrahman Hakim, Ansori, and Lenny Nuraeni, "Model Kemitraan PKBM, Dunia Industri, Dan Pemerintah Untuk Pemberdayaan Ekonomi Masyarakat Melalui Pendidikan Kewirausahaan," *Jendela PLS* 10, no. 1 (2025): 138-45.

Discussion

Increasing the Capacity and Competitiveness of MSMEs

The empowerment program in Bira Beach has demonstrated a tangible impact on increasing the capacity and competitiveness of micro, small, and medium enterprises (MSMEs), which serve as the foundation of the local coastal economy. Despite their strong potential in culinary, handicraft, lodging, and tourism services, many MSMEs in coastal regions face systemic challenges such as limited access to capital, low digital literacy, and a lack of modern marketing strategies^{25 26}. This condition aligns with prior findings showing that MSME competitiveness in developing economies often depends on their ability to integrate innovation, technology adoption, and financial inclusion²⁷.

The program's design, centered on training in sustainable creative economy and financial technology adoption, reflects the capability-based view (CBV) which emphasizes building internal competencies as the primary driver of firm competitiveness²⁸. Through workshops and direct mentoring, participants developed products based on local wisdom while simultaneously learning to adopt digital payment systems such as QRIS and e-wallets. This hybrid approach not only enhances operational efficiency but also strengthens market integration in a digital economy²⁹. Moreover, by incorporating financial technology and creative marketing tools, the program contributes to MSME resilience, as digital inclusion has been shown to increase access to markets and consumers³⁰.

Training on the use of social media, particularly TikTok, demonstrates how MSMEs can leverage user-generated content (UGC) and storytelling to enhance brand visibility and consumer engagement. Prior studies confirm that social media marketing improves small business performance through interactivity and emotional connection with customers³¹. As a result, participants have developed a stronger understanding of product value addition, branding, and professional business management.

However, challenges remain, particularly regarding limited access to capital and infrastructure such as unstable telecommunications networks. These barriers are

²⁵ Tennyson, *The Partnering Toolkit: An Essential Guide to Cross-Sector Partnering*.

²⁶ OECD, *Strengthening SMEs and Entrepreneurship for Productivity and Inclusive Growth* (OECD Publishing, 2022).

²⁷ M Ayyagari, A Demirgüç-Kunt, and V. Maksimovic, *SME Finance and Innovation: Lessons from Developing Economies* (World Bank Research Observer, 2021).

²⁸ David J. Teece, *Dynamic Capabilities and Strategic Management: Organizing for Innovation and Growth* (Oxford University Press, 2018).

²⁹ F Rahman and T Prabowo, "Financial Technology Adoption and MSME Competitiveness in Indonesia," *Journal of Innovation and Entrepreneurship*, 2023.

³⁰ N Zainuddin, M Rahman, and H Wahab, "Digital Inclusion and SME Performance: Evidence from Southeast Asia," *Studies, Journal of Asian Business and Economic*, 2022.

³¹ S Hassan, N. F Nadzri, and A Rahman, "Social Media Marketing and Microenterprise Performance: The Mediating Role of Digital Engagement," *Asian Journal of Business Research*, 2021.

consistent with findings by Alam and Kurniawati, who emphasize that digital transformation in rural MSMEs requires sustained government support and ecosystem collaboration³². Continuous mentoring and monitoring are thus essential to sustain program outcomes. Collaboration with local tourism authorities, financial institutions, and educational institutions is also critical in strengthening the MSME ecosystem, ensuring that Bira Beach enterprises can adapt to technological change and compete in increasingly competitive tourism markets³³.

Sustainable Business Practices (SDG Principles)

The empowerment program implemented in Bira Beach has proven effective in integrating sustainable development principles within MSME operations. As MSMEs represent a vital pillar of inclusive and localized economic growth, their participation in sustainability efforts is crucial to advancing the UN Sustainable Development Goals (SDGs), particularly SDG 1 (No Poverty), SDG 8 (Decent Work and Economic Growth), and SDG 12 (Responsible Consumption and Production). However, many MSMEs still face significant barriers in applying sustainable practices due to limited financial resources, a lack of knowledge, and the absence of clear business incentives^{34 35}.

The program's training and mentoring components were structured to bridge this knowledge gap by embedding the Triple Bottom Line (TBL) framework emphasizing the balance between economic profitability, social equity, and environmental responsibility^{36 37}. Through interactive workshops, MSME participants were trained to apply sustainable creative economy principles and resource efficiency strategies that minimize waste and promote eco-friendly production processes. This approach corresponds with the findings of Purwanto and Darmawan, who argue that local MSMEs adopting TBL-oriented innovation exhibit stronger market resilience and community trust³⁸.

Participants also demonstrated improved awareness of the SDGs and their relevance to daily business practices. Practical modules on responsible production encouraged the reduction of plastic packaging and the adoption of biodegradable

³² M. N Alam and D Kurniawati, "Digital Transformation and MSME Resilience: Evidence from Coastal Regions in Indonesia," *Journal of Small Business and Enterprise Development*, 2022.

³³ N Ismail and S Mahmud, "Tourism-Driven MSME Development in Coastal Areas: Challenges and Opportunities," *Tourism Management Perspectives*, 2020.

³⁴ M. H Rahman and S Alam, "Barriers to Sustainable MSME Practices in Developing Economies: The Role of Institutional Support," *Sustainability* 14, no. 8 (2022).

³⁵ UNDP, "Supporting MSMEs for Sustainable Development," *United Nations Development Programme*, 2023.

³⁶ John Elkington, *Cannibals with Forks: The Triple Bottom Line of 21st-Century Business* (Capstone Publishing, 1998).

³⁷ Dima Jamali, *CSR and Sustainability: From Theory to Practice* (Springer, 2019).

³⁸ A Purwanto and I Darmawan, "Triple Bottom Line Approach and MSME Resilience: Evidence from Indonesia's Creative Sector," *Journal of Sustainable Entrepreneurship*, 2021.

materials, aligning with global best practices for sustainable entrepreneurship³⁹. Furthermore, the integration of financial technology (fintech) in business operations, such as QRIS and digital bookkeeping, supports SDG 8 by promoting financial inclusion and improving business accountability⁴⁰. As a result, MSMEs in Bira Beach not only optimized production efficiency but also enhanced their transparency and competitiveness in the digital economy.

Nonetheless, persistent challenges remain, particularly concerning limited access to capital for investment in sustainable technology and infrastructure. Similar findings were reported by Widodo and Setiawan, who emphasized that the transition toward sustainable business models among Indonesian MSMEs requires enabling policies, affordable green financing, and continuous technical support⁴¹. Therefore, the sustainability of empowerment outcomes in Bira Beach depends on multi-stakeholder collaboration involving the local government, private sector, and higher education institutions to establish an ecosystem that encourages sustainable innovation⁴².

By embedding SDG-oriented principles into their production and marketing processes, MSMEs at Bira Beach are progressively transforming from traditional small-scale entrepreneurs into sustainability-driven enterprises. This transformation not only enhances economic viability but also fosters environmental stewardship and social well-being within the coastal community; realizing the broader vision of inclusive, resilient, and sustainable local development.

Digital Literacy and MSME Product Innovation

In today's rapidly evolving digital economy, the ability of micro, small, and medium enterprises (MSMEs) to leverage technology determines their competitiveness, efficiency, and sustainability. The empowerment program conducted in Bira Beach effectively addressed one of the most pressing challenges faced by coastal entrepreneurs, low levels of digital literacy and limited capacity for innovation. By combining financial technology training, creative economy workshops, and hands-on mentoring, the program served as a catalyst for digital transformation and product innovation among local MSMEs.

Digital literacy, according to van Deursen and van Dijk, goes beyond basic technological skills; it encompasses the critical and strategic use of digital tools for

³⁹ Noemi Sinkovics, Rudolf R. Sinkovics, and Jason Archie-Acheampong, "An Overview of Sustainable Entrepreneurship Research: The Role of Micro and Small Enterprises," *Journal of Business Venturing Insights*, 2021.

⁴⁰ World Bank, "Fintech and the Future of Financial Inclusion: Empowering MSMEs through Technology," World Bank Publications, 2022.

⁴¹ Sri Widodo and Henry Setiawan, "Henry Setiawan," *Journal of Cleaner Production*, 2023, 421.

⁴² OECD, "Green Transformation of SMEs: Policy Guidance for Sustainable Growth," OECD Publishing, 2023.

communication, marketing, and value creation⁴³. In line with this conceptualization, the program emphasized not only the adoption of digital payment systems such as QRIS and e-wallets but also the ability to utilize social media platforms like TikTok and Instagram for brand promotion and market expansion. Studies have shown that digital competence significantly enhances MSME performance through increased visibility, customer engagement, and cost-effective marketing^{44 45}.

Moreover, the integration of financial technology (fintech) into MSME operations provides inclusive access to payment systems and digital financial services, contributing to the democratization of business processes and the strengthening of financial inclusion^{46 47}. This aligns with Rogers' Diffusion of Innovation Theory, which explains how the perceived usefulness, simplicity, and compatibility of an innovation influence its adoption⁴⁸. In the context of Bira Beach, the availability of hands-on mentoring and peer learning accelerated the diffusion process, enabling participants to quickly adopt digital technologies in their daily business transactions.

Parallel to the enhancement of digital literacy, the program also encouraged product innovation rooted in local wisdom, which is vital for preserving cultural identity while ensuring market relevance. Product diversification and creative packaging inspired by coastal culture not only improved aesthetic and commercial value but also aligned with Schumpeter's concept of innovation as the driver of entrepreneurial growth⁴⁹. Similar findings by Nugroho et al. and Suryani & Setyawan show that community-based innovation programs that integrate traditional knowledge with digital marketing tools enhance both sustainability and competitiveness^{50 51}.

The mentoring process also revealed a transformation in entrepreneurial behavior; participants became more proactive in using digital analytics to understand

⁴³ Alexander Jam van Deursen and Jan Agm van Dijk, "The First-Level, Second-Level, and Third-Level Digital Divides: A Systematic Review," *Computers & Education* 146 (2019): 103–10.

⁴⁴ UNCTAD, "Digital Economy Report 2023: Building a Sustainable Digital Future," United Nations, 2023.

⁴⁵ Yogesh K. Dwivedi et al., "Setting the Future of Digital and Social Media Marketing Research: Perspectives and Research Propositions," *International Journal of Information Management* 59 (2021): 1–37, <https://doi.org/10.1016/j.ijinfomgt.2020.102168>.

⁴⁶ Ficawoyi Donou-Adonsou and Kevin Sylwester, "Financial Development and Poverty Reduction in Developing Countries: New Evidence from Banks and Microfinance Institutions," *Review of Development Finance* 6, no. 1 (2016): 82–90, <https://doi.org/10.1016/j.rdf.2016.06.002>.

⁴⁷ World Bank, "Fintech and Sustainable Finance: Expanding Access and Accountability for MSMEs," World Bank Publications, 2022.

⁴⁸ Everett M. Rogers, *Diffusion of Innovations (5th Ed.)* (Free Press, 2003).

⁴⁹ Joseph Schumpeter, *The Theory of Economic Development* (Harvard University Press, n.d.).

⁵⁰ A Nugroho, S Hartati, and F Rahman, "Local Wisdom-Based Innovation for MSME Sustainability: Evidence from Indonesia's Coastal Communities," *Journal of Sustainable Development Studies* 14, no. 3 (2022): 45–60.

⁵¹ I Suryani and D Setyawan, "Creative Product Innovation through Digital Platforms among Micro-Entrepreneurs," *Asian Journal of Innovation and Policy* 10, no. 2 (2021): 189–210.

customer preferences and optimize their product offerings. This behavioral shift indicates a transition toward a more data-driven and innovation-oriented mindset, which is essential for long-term MSME resilience⁵². As a result, many participants have reported improved sales performance, broader customer reach, and stronger collaboration among fellow entrepreneurs. Despite these positive outcomes, challenges remain, particularly in maintaining consistent digital engagement and overcoming infrastructure limitations such as unstable internet access. Addressing these constraints requires continuous collaboration among local government agencies, universities, and private technology providers to build a more supportive digital ecosystem⁵³.

In summary, the empowerment program in Bira Beach demonstrates that improving digital literacy and fostering innovation are mutually reinforcing processes. By equipping MSME actors with the skills and mindset to adopt technology creatively, the program has contributed to both economic empowerment and the preservation of local cultural values; creating a model of sustainable digital transformation for coastal communities.

Partnership between MSMEs, Academics, and Government

Amid the challenges faced by MSMEs in Bira Beach, a synergistic partnership between business actors, academics, and the government has proven to be a strategic foundation for building an ecosystem that enhances capacity, competitiveness, and sustainability. This collaborative model aligns with the Triple Helix framework⁵⁴, which emphasizes interaction between universities, industry, and government as a catalyst for innovation and regional development. Within this framework, community-based partnerships enable shared knowledge creation and resource integration, fostering inclusive economic growth in coastal regions⁵⁵.

The empowerment program in Bira Beach was designed as a participatory platform to address common local problems such as limited access to capital, low digital literacy, and the need for sustainable business practices. The Community Service Team, comprising university academics, facilitated Focus Group Discussions (FGDs) and mentoring sessions involving MSME actors and local government representatives. These engagements created a dialogical learning environment where community needs

⁵² Neeta Baporikar, "MSME Digital Transformation: Challenges and Strategies for Sustainable Growth," *Journal of Entrepreneurship and Innovation in Emerging Economies* 8, no. 2 (2022): 167–85.

⁵³ OECD, "Digital Transformation and SMEs: Empowering Inclusive Growth," OECD Publishing, 2023.

⁵⁴ Henry Etzkowitz and Loet Leydesdorff, "The Dynamics of Innovation: From National Systems and 'Mode 2' to a Triple Helix of University–Industry–Government Relations," *Research Policy* 29, no. 2 (2000): 109–23, [https://doi.org/https://doi.org/10.1016/S0048-7333\(99\)00055-4](https://doi.org/https://doi.org/10.1016/S0048-7333(99)00055-4).

⁵⁵ Elias G. Carayannis and David F.J. Campbell, *Mode 3 Knowledge Production in Quadruple Helix Innovation Systems* (Springer, 2012), <https://link.springer.com/book/10.1007/978-1-4614-2062-0>.

informed intervention design, reflecting the principles of collaborative governance and participatory development^{56 57}.

The partnership materialized through joint training sessions where academics contributed expertise in creative economy and financial technology, while the government provided regulatory and logistical support. Local collaboration with stakeholders such as the Tourism Office, Village-Owned Enterprise (BUMDes), the National Board of Zakat (BAZNAS), and sharia microfinance institutions offered practical pathways for financial inclusion and capital access. The initiative also encouraged discussions toward simplifying business licensing and providing policy incentives for MSMEs adopting sustainable business practices.

The outcomes of this collaboration affirm that MSME empowerment is most effective when digital innovation, local knowledge, and sustainability principles are jointly leveraged. Consistent with prior studies^{58 59}, the integration of fintech tools such as QRIS and e-wallets contributes to greater transparency, efficiency, and competitiveness in small business operations. Moreover, the tripartite collaboration model strengthens the local business ecosystem and accelerates the achievement of SDGs by promoting inclusive, digitally enabled, and environmentally responsible entrepreneurship.

Conclusion

This community service initiative successfully enhanced the capacity and competitiveness of MSME actors in Bira Beach, South Sulawesi, by integrating sustainable creative economy principles with the adoption of digital financial technology. The program's participatory and collaborative design allowed MSME participants not only to acquire technical skills but also to internalize sustainability values and digital literacy as interconnected drivers of business transformation. These outcomes demonstrate that community-based empowerment, when aligned with SDG principles and supported by digital innovation, can generate meaningful behavioral and managerial change among micro-entrepreneurs in coastal areas.

What distinguishes this project is its fusion of sustainability education and fintech adoption, two domains often treated separately in MSME development programs. The findings highlight that exposure to both aspects within a participatory learning framework can accelerate the transition from traditional to technology-enabled and

⁵⁶ Carayannis and Campbell.

⁵⁷ Andrea Cornwall, "Women's Empowerment: What Works?," *Journal of International Development* 28, no. 3 (2016): 342-59.

⁵⁸ H Rasool, A Shah, and M Asif, "Financial Technology and SME Performance: Evidence from Developing Economies," *Journal of Small Business and Enterprise Development* 28, no. 6 (2021): 1043-64.

⁵⁹ A. H Pratono and G Tjahjono, "How Does Firm Performance Influence the Readiness for Innovation?," *International Journal of Business and Society* 18, no. 2 (2017): 273-90.

sustainability-oriented business models. This provides a useful reference for future community service and academic initiatives seeking to integrate economic empowerment with digital inclusion and environmental responsibility.

To sustain the positive outcomes, continuous mentoring and cross-sector collaboration involving local governments, financial institutions, and universities remain crucial. Such partnerships will ensure that the momentum generated from this program leads to broader systemic change creating resilient, innovative, and sustainable MSMEs that contribute to inclusive economic growth in Indonesia's coastal regions.

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