

Strengthening The Coffee Value Chain Through Strategic Integration of MSME's, Tourism, and Digital Innovation

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Abstract

This paper explores a strategic model to strengthen Indonesia's coffee value chain through the integration of micro, small, and medium enterprises (MSMEs), tourism, and digital innovation. Despite Indonesia's strong position in the global coffee market, MSMEs face challenges related to sustainability, market access, and digital literacy. This community service initiative implements a tripartite approach: mentoring MSMEs, providing digital marketing training, and developing coffee tourism destinations. The results show that combining capacity building, local storytelling, and experiential tourism enhances the value proposition of local coffee. Digital platforms significantly improve operational agility, while coffee tourism offers new revenue streams and reinforces cultural identity. Cross-sector collaboration involving academics, government, and communities proves essential for sustainable ecosystem development. This integrative approach demonstrates that strengthening the coffee value chain requires not only improving production but also fostering innovation, branding, and multi-stakeholder synergy rooted in local potential and global standards.

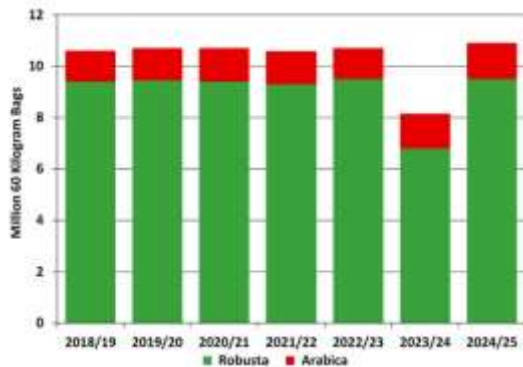
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INTRODUCTION

The coffee industry is one of the most dynamic global agricultural sectors that plays an

important role in international trade, local economic resilience, and sustainable development. Globally, coffee ranks as the second most traded commodity after petroleum,

with more than 25 million farmers in more than 70 countries directly involved in its production.



Source: Hariyadi, (2025)

The increasing demand is supported by the growth of coffee consumption culture, the emergence of specialty coffee trends, and the transformation of urban lifestyles that make coffee a symbol of productivity and lifestyle. In Indonesia, coffee is not only a leading export product, but also an integral part of the socio-economic dynamics in various regions. As one of the world's largest coffee producers, Indonesia has a significant contribution to the national economy, both in terms of export value and its role in supporting micro, small and medium enterprises (MSMEs) that form the basis of the people's livelihood (Nurkhayati et al., 2024). However, despite its high potential, the national coffee industry still faces a number of fundamental challenges rooted in a suboptimal value chain structure. The MSMEs that dominate the sector are often locked into weak supply chains, with limited access to market information, technology, funding, and sustainability certification. According to Handayani et al., (2023), Among the seven coffee MSMEs in Java interviewed, only four were aware of the concepts of carbon footprint and ecolabel. This unawareness is a major challenge in penetrating high-standard export markets that require compliance with environmentally friendly and sustainable practices. This lack of understanding of sustainability issues also shows that many MSME players are not ready for the era of global trade based on green regulations. This is compounded by the lack of integrated policy support between the agriculture, environment, and trade sectors. In addition to sustainability

challenges, coffee MSMEs also face constraints in terms of operational efficiency and mastery of digital technology.

Coffee MSME players that are able to adopt digital platform capabilities show improvements in organizational agility and competitiveness in national and international markets (Suzianti et al., 2024). Digital platforms not only simplify the supply chain but also expand market access and increase transparency in the logistics system. On the other hand, MSME players who do not have these capabilities tend to be left behind and miss out on value-added opportunities that can be achieved through digital innovation. Digital transformation has also proven to be the key to adaptation when facing a crisis such as the COVID-19 pandemic. Digitalization in coffee marketing is able to expand market reach, improve operational efficiency, and maintain production sustainability even in uncertain conditions (Kurniawan et al., 2023). The important role of coffee MSMEs in building the local economy needs to be complemented by efforts to strengthen the value chain through a cross-sectoral approach that involves strategic integration with the tourism sector and digitalization. Coffee tourism villages have become clear examples of how local potential can be optimized through synergies between coffee production, tourism attractions, and community participation. This integration strengthens the attractiveness of tourist destinations while creating new markets for local products.

Business creativity and technology are used to support community-based MSMEs to adapt to market changes through collaborative and community-based approaches. Strengthening collaboration across actors is also an important foundation in building a resilient local economic ecosystem. Suryawati et al., (2025) emphasized the importance of an actor-network-based approach in building policy strategies for the development of regionally leading MSMEs such as coffee. Policies can focus on creating synergies between government, academics, the private sector, and civil society to extend the socioeconomic impact

of the coffee sector. The coffee sector integrated with tourism not only enhances the tourist experience but also creates income diversification opportunities for coffee businesses through ecotourism, coffee education, and interactive experiences at coffee gardens. In addition, the engagement of MSMEs in the halal coffee supply chain is also a strategic opportunity amid the increasing demand of the global Muslim market. Indonesia, as a country with the largest Muslim population, has great potential to lead the halal industry sector, including coffee. However, the development of the halal value chain requires a strategy to strengthen competitiveness as well as the development of an efficient and inclusive certification system (Nurkholidah & Putri, 2025). In this context, the integration of digital platforms, halal certification, and promotion of coffee-based halal tourism is a concrete step that supports MSME empowerment while expanding international market penetration.

In practice, efforts to strengthen coffee MSMEs require policies that touch the high-end and low-end aspects of the supply chain, from primary processing at the farm level to branding and export strategies. Government interventions need to be designed holistically, promoting cross-sector collaboration and targeted utilization of digital technology. Digital literacy, business coaching, and training on sustainability practices and financial management are important elements that must be included in international community service programs. Thus, strengthening the coffee value chain in Indonesia is based on the synergy between MSMEs, digital innovation, and the development of local tourism destinations. Initiatives such as digital marketing transformation, coffee tourism villages, and the development of halal and sustainability certification show that an integrated approach can create greater added value while expanding economic opportunities for local communities. Through this approach, community service has a strategic role to play in building a sustainable economic development model that is empowering, inclusive, and based on local potential.

LITERATURE REVIEW

Coffee Value Chain

The coffee value chain refers to a continuous process from cultivation, harvest, post-harvest, distribution, processing, to marketing and consumption. The fundamental problems in this chain are the low added value received by farmers and MSME players, limited market access, and constraints in quality and sustainability standards compliance. Handayani et al., (2023) explained that only a small proportion of coffee MSMEs in Java understand the importance of carbon footprints and eco-labels, even though these are key pre-requirements in a sustainable export market. Rico et al., (2024) added that coffee agribusiness institutions in Toraja face a gap between the strategic role of actors (farmers, traders, agricultural offices) and the quality of the implementation of distribution functions and selling value. OCDE, (2020) shows that the transformation of agricultural value chains, including coffee, requires integrated reforms that connect export strategies, strengthening local institutions, and digitizing production processes. Globally, the complexity of coffee value chains is also evident in the integration challenges between actors in producer countries and industry players in consumer countries, including differences in margins and control of market information.

Role of MSMEs in the Value Chain

MSMEs contribute to many points of the coffee value chain, from cultivation, post-harvest, packaging, to innovation of processed products. However, MSME players are often challenged by managerial aspects, production quality, and digital promotion. Nurkhayati et al. (2024) highlighted the role of MSME communities in coffee tourism villages that still manage finances informally, but have great potential in driving the local economy through local wisdom-based innovation. A technology-based creative business approach to promote MSMEs from the informal sector to the formal and expansive sector, then MSMEs also play a role in post-pandemic digital adaptation as a driver of local economic growth in the

agriculture and food and beverage sectors. Small businesses that have survived post-pandemic are those that have developed product diversification and technology-based distribution channels.

Tourism as a Value Chain Support

Coffee agritourism or coffee tourism is an innovative approach that integrates coffee production with tourism experiences, education, and product promotion. Coffee tourism can create added value through activities such as coffee farm tours, coffee brewing workshops, and roasting house visits. In addition to being an economic diversification strategy, this approach increases consumer awareness about the origins of coffee and the cultural value behind a cup of coffee. In addition, green tourism is also part of a local resource-based economic development strategy, with the potential to strengthen the value chain of agriculture-based products such as coffee. According to Widiastini et al., (2023) The integration of tourism and MSMEs enables the creation of alternative sources of income and supports post-pandemic economic recovery.

Digital Innovation in Strengthening Value Chain

Digital innovation is a strategic tool to improve supply chain efficiency and transparency, strengthen market access, and expand the competitiveness of MSMEs. Technologies such as e-commerce, blockchain-based tracking systems, digital marketing, and the Internet of Things (IoT) for coffee quality monitoring can improve production efficiency, expand market reach, and create transparency in the distribution chain. In addition, digital platform capabilities significantly increase the organizational agility of coffee MSME players in responding to changing market demands (Suzianti et al., 2024). On the other hand, Oktavianti et al., (2024) emphasized the importance of integrating ESG approaches in digital marketing strategies to increase brand credibility and consumer preference for green products. In addition, integrated digitalization strategies can also be used by MSMEs to strengthen consumer loyalty through personalized and social value-based shopping experiences.

Strategics Integration Models

Strategic integration models that combine MSMEs, tourism and digitalization are increasingly relevant in the context of sustainable local economic development. Study OCDE (2020) in Dominican Republic shows that community-based production with technological support, tourism promotion, and integrated trade policies are able to change the national agribusiness value structure. In addition, there is a collaborative framework involving academia, government and businesses to create a cross-sector innovation ecosystem. Thus, the importance of sustainable collaboration between academics, business, and technology to solve the supply chain crisis and promote growth based on green innovation. There is also a digital-based creative economy model as an approach to strengthen the economic resilience of coffee-based communities by promoting value chain strengthening through integration between digital training, local tourism promotion, and local government incentives for MSMEs based on superior products.

RESULT AND DISCUSSION

Result

The service activities carried out include three main components:

1. Mentoring of coffee MSMEs
2. Digital transformation training
3. Development of community-based coffee tourism destinations.

From this series of activities, several important findings were obtained that are relevant in solving the problems faced by MSMEs and building a more resilient local economic ecosystem. First, through direct mentoring of coffee MSMEs, it was found that most businesses still run their businesses conventionally without adequate management documentation. Financial management and production stocks are still informal, as also reported in Nurkhayati et al., (2024) in the Romban Djoyo community. Through a participatory approach, this activity succeeded in encouraging MSME players to start preparing

simple business plans, separating personal and business finances, and applying simple recording principles using Google Sheets-based digital templates.

Second, the digital transformation and online marketing training resulted in significant changes in the way MSME players interact with consumers. Many participants who had never used social media for promotion have started to actively utilize Instagram, TikTok, and WhatsApp Business. This finding is in line with the results of the Suzianti et al., (2024) study which emphasizes the importance of digital platform capabilities to increase organizational agility in responding to the market. In addition to promotion, the training also covered aspects of storytelling content creation based on local values and sustainability. Participants were invited to recognize typical narratives such as the manual harvesting process, traditional roasting, and efforts to maintain the coffee forest ecosystem.

Third, in order to develop coffee tourism destinations, this activity initiated the establishment of an educational trail in partner coffee villages, in the form of a "Coffee Experience Trail" that presents the process from farm to cup. Local residents are involved as tour guides and workshop facilitators, therefore creating additional economic opportunities beyond the sale of coffee products. This finding supports the study results of Widiastini et al., (2023) in Bali, which emphasized the importance of tourism as a lever for post-pandemic adaptation of MSME businesses. Visitors to the event not only purchased products, but also gained an in-depth understanding of the production process and local values. In addition to the main results above, this activity also mapped strategic parties at the local level such as farmer groups, BUMDes managers, and cooperative partners. This is important for developing collaborative networks to strengthen the coffee value chain in a sustainable manner through actor-network approach (Suryawati et al., 2025). In summary, the service activities prove that the integration of MSME mentoring, digital training, and coffee-based tourism development can create

sustainable added value, strengthen the position of MSMEs in the value chain, and increase regional attractiveness through a creative and participatory economic approach.

Discussion

Impact on Capabilities, Distribution, and Marketing of Coffee Product MSMEs

This service activity significantly strengthens the basic and advanced capabilities of coffee MSMEs, especially in the aspects of distribution, marketing, and strengthening product identity (branding). In terms of distribution, many MSME players who initially only limited their sales to the local level have recently started to understand direct-to-consumer strategies through the use of marketplaces and social media. This is in line with the model developed by Suzianti et al., (2024) in which the ability to manage digital platforms can shorten the supply chain and connect producers directly with national and even international markets.

In terms of marketing, the digital content training helped businesses change their promotional approach from simply product information to emotionally engaging narratives and coffee origin stories. The storytelling strategy is also proven to increase consumer engagement and strengthen product positioning in niche markets, such as the specialty coffee and educational tourism markets. This is confirmed by Oktavianti et al., (2024) This is confirmed by Oktavianti et al., (2024) who emphasize that an Environment, Social, and Governance (ESG) based approach and digital branding can improve the competitiveness of MSMEs in the post-pandemic era. On the branding side, the importance of halal labels, ecolabels, and local certifications is getting attention. Although not all MSMEs have been able to access formal certification, there is a growing awareness of the importance of sustainability and ethics-based value propositions. This is an important first step in readiness for expanding into the export market, as Handayani et al., (2023) study on the importance of carbon footprints and ecolabels in the global coffee industry.

Cross-sector Collaboration

The success of this service activity is also determined by the cross-sector collaboration that is actively involved. Starting from Academics, Local Government, Coffee Community, to Tourism Actors.

1. Academics play a role in designing training modules and providing research-based mentoring.
2. The local government through the cooperative and MSME office supports the facilitation of legality and access to business licenses
3. The local coffee community acts as a connector between businesses and consumers.
4. Village tourism actors support the activity of coffee destinations as part of thematic tourism packages.

This collaborative model is aligned with the concept of *actor network* (Suryawati et al., 2025), where synergy between actors is a key factor in building a local economic ecosystem based on superior regional potential such as coffee.

Challenges and Opportunities for Cross-Sector Integration

Challenges in cross-sector collaboration arise in the form of perception gaps between actors, overlapping programs between agencies, and low coordination in cross-sector implementation. MSME actors also still depend on a top-down assistance approach, rather than self-reliance-based development. Meanwhile, integration opportunities are available. For example, the tourism sector is the main distribution channel for local coffee through the concept of souvenir consumption and experience-based marketing. Local governments can facilitate regulations and access to financing, while academics act as the social and technological innovation incubator. In addition, the strategic use of digital business in the tourism and MSME sectors can also strengthen economic recovery and local resilience.

CONCLUSION

This service activity shows that strengthening the coffee value chain at the MSME level cannot be built only through increasing production, but requires an integrated approach with the tourism sector and digital innovation. Facilitation of coffee MSMEs in the aspects of business management, digitalization, and marketing has a direct impact on increasing operational efficiency, expanding markets, and strengthening local coffee brand identity. The Coffee Experience Trail model developed with communities and tourism actors has successfully expanded the contact points between coffee products and consumers, creating added value through experience and education. The main contribution of this service activity is to increase the value of local coffee, both from an economic and symbolic perspective. From the economic side, coffee products that were previously only marketed locally now have access to digital markets and tourists, while from the symbolic side, local coffee is starting to be positioned as part of a cultural and sustainability narrative. Digital training enables MSME players to understand the importance of value proposition and product differentiation in the context of a competitive market.

IMPLICATIONS

Practically, this activity has direct implications for various parties:

1. For local communities, strengthening digital capacity and opening coffee tourism destinations create new economic opportunities based on local potential.
2. For local governments, the findings of this service become the basis for cross-sector policy development, especially in integrating MSMEs, tourism, and digital transformation in regional development planning.
3. For the private sector, especially coffee and technology industry players, the results of this activity provide opportunities for partnerships in the development of a technology-based coffee ecosystem, both in the aspects of logistics, distribution, and e-commerce.

STRATEGIC RECOMMENDATIONS

Strategic recommendations to strengthen the sustainability of this integrative program are as follows:

1. Strengthening collaborative ecosystems across sectors
Local governments need to facilitate coordination forums between academics, MSME players, tourism players, and coffee communities in order to create integration-based policies, not sectoral ones.
2. Establishment of a local coffee digitalization and branding center
Universities and local training institutions can be the main drivers for organizing advanced training in digital management, data-based marketing, and strengthening product narratives.
3. Development of coffee-based educational tourism model
Potential coffee villages need to be facilitated to establish coffee-based educational trails and destinations, combining cultural, environmental, and consumer experience elements.
4. Incentive scheme for sustainable products
This program requires support in the form of fiscal incentives or subsidies for MSMEs that adopt environmentally friendly production practices and Environment, Social, and Governance (ESG)-based marketing.

REFERENCES

- Handayani, T., Purnamasari, B. D., Sakti, A. Y. N., Septiani, M., Wiloso, E. I., & Sasongko, N. A. (2023). Exploration of Challenges and Readiness MSMEs Coffee Business in the Age of Global Trade Based on Carbon Footprint (Ecolabel). *IOP Conference Series: Earth and Environmental Science*, 1267(1). <https://doi.org/10.1088/1755-1315/1267/1/012022>
- Hariyadi, P. (2025). *Kopi Indonesia: Tantangan di Tengah Perubahan Iklim*. Foodreview.Co.Id. <https://m.foodreview.co.id/blog-156696970-Kopi-Indonesia-Tantangan-di-Tengah-Perubahan-Iklim.html>
- Kurniawan, M., Normasyhuri, K., & Pujianti, E. (2023). Transformation of Digital Marketing the Coffee Production in COVID-19 Pandemic : Islamic Economic Paradigm. *AL-FALAH: Journal of Islamic Economics*, 8(1), 31. <https://doi.org/10.29240/alfalah.v8i1.5618>
- Nurkhaiyati, S., Shofwan, I., & Gupta, S. (2024). Management of Coffee MSMEs at Romban Djoyo Community in the Tourism Village. *Jurnal Pendidikan Dan Pemberdayaan Masyarakat (JPPM)*, 11(2), 158–174. <https://doi.org/10.29240/alfalah.v8i1.5618>
- Nurkholidah, S., & Putri, S. W. (2025). *A Strategy to Improve the Halal Industry in Facing Global Competition*. 328–340. <https://doi.org/10.18502/kss.v10i8.18445>
- OCDE. (2020). *Production Transformation Policy Review of the Dominican Republic*. https://www.oecd-ilibrary.org/development/production-transformation-policy-review-of-the-dominican-republic_1201cfea-en
- Oktavianti, A., Alpian, I., Mudzaki, A., & Savitri, E. (2024). *Leveraging Environmental, Social, and Governance Perspectives for Enhancing Marketing Strategies in Indonesia's Small to Medium Enterprises Across Digital Platforms*. Atlantis Press International BV. https://doi.org/10.2991/978-94-6463-465-5_2
- Rico, Dharma, R., Salman, D., & Mahyuddin. (2024). The performance of Arabica coffee agribusiness actors in North Toraja Regency, Indonesia. *Cogent Food and Agriculture*, 10(1). <https://doi.org/10.1080/23311932.2024.2363002>
- Suryawati, D., Helpiastuti, S. B., & Dody, H. (2025). *Unlocking the Role of Actor Networks and Strategies for Developing Collaborations in Regional Featured MSEs*. 21(10), 47–60.
- Suzianti, A., Kaniawari, R., Fathia, S. N., Amaradhanny, R. D., Muslim, E., & Alfian,

E. T. (2024). Towards A Sustainable Coffee Supply Chain: The Role of Digital Platform Capability in Increasing Organisational Agility. *International Journal of Sustainable Engineering*, 17(1), 80–97. <https://doi.org/10.1080/19397038.2024.2400987>

Widiastini, N. M. A., Arsa, I. K. S., Syah, A. M., & Hajarrahmah, D. (2023). How Do Micro, Small, and Medium Enterprises (MSMEs) in Bali Survive The Pandemic? A Qualitative Study in Buleleng, Tabanan, Gianyar, and Denpasar. *International Journal of Professional Business Review*, 8(3), 1–24. <https://doi.org/10.26668/businessreview/2023.v8i3.829>