

Empowering Traditional SMEs through Participatory Innovation, Digitalization Strategies, and Product Diversification: A Community Service Study on *Teh Gurah* in Wukirsari, Yogyakarta

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Abstract

This community service initiative was conducted in Wukirsari, Bantul, Yogyakarta, as part of the 1st International Community Services organized by Sustainable International Community Services (SICS). The program aimed to strengthen traditional entrepreneurship by supporting the transformation of gurah therapy—originally administered nasally—into Teh Gurah, an innovative, hygienic, and drinkable herbal tea product. Using a participatory qualitative approach, the program facilitated active collaboration between business actors, the local community, and supporting institutions. The study documented the evolution of the production process, regulatory compliance, community engagement, innovation potential, and operational challenges. Although the enterprise produces up to 40,000 tea boxes per month and holds BPOM and halal certifications, limitations remain in product diversification, long-term strategic planning, digital adoption, and resilience against market fluctuations. Recommendations include strengthening digitalization strategies, supporting product diversification (such as herbal capsules and instant tea), developing a sustainability roadmap, and enhancing partnerships with universities and local governments. The community service process contributed to the formulation of the Culturally Embedded Participatory Innovation (CEPI) model, which integrates local wisdom, simple technology adaptation, digital integration, and institutional synergy to empower traditional SMEs towards sustainable and competitive development. The findings highlight the need for continuous mentoring and comprehensive interventions to ensure that local heritage-based products like Teh Gurah thrive in both local and global markets.

Keywords: *Community Empowerment; Gurah Herbal Tea; Local Innovation; MSMEs; Digital Transformation*

I. INTRODUCTION

Indonesia is known for its abundant biodiversity and rich heritage of traditional knowledge in the field of herbal medicine. This tradition has long been part of community efforts to maintain health, both preventively and curatively, particularly in regions with limited access to modern healthcare facilities (Fitriani et al., 2023). One of the traditional medical practices that has survived and continues to develop to this day is *gurah*, a method known for cleansing the respiratory tract by stimulating mucus discharge from the nose. This practice originated in Yogyakarta and has become an integral part of the local culture, passed down through generations.

However, despite its recognition in the context of traditional medicine, *gurah* faces a major challenge in its form of application, which is less accepted by certain segments of society, especially among younger generations and urban groups who prioritize comfort and the safety of products based on modern scientific standards (Syamsuri & Halim, 2023). In this context, innovation is inevitable. The shift from nasal therapy to a herbal drink form such as *Teh Gurah* reflects the transformation of traditional knowledge into a more modern form that is easier for the wider public to accept (Ardiansyah & Maharani, 2024).

The development of *Teh Gurah* is a tangible example of how cultural heritage can be innovatively packaged to meet market needs while preserving traditional values. This product combines export-quality black tea with local herbal leaves, specifically *sri gunggu* leaves, which are known for their detoxifying properties. The beverage form not only facilitates distribution and consumption but also expands the market segment to digital platforms (Nugroho et al., 2024).

From a community empowerment perspective, this transformation creates significant economic value. The small and medium enterprises (SMEs) managing this product have not only increased their production capacity but have also gained support from government institutions such as the Health Office, SME Office, and the National Food and Drug Agency (BPOM). This demonstrates the synergy between local entrepreneurs and regulatory bodies in ensuring the product meets adequate legality and safety standards (Hidayati & Siregar, 2023).

Nonetheless, the development of products based on local knowledge is not without its challenges. These include limited human resources, minimal innovation in product variants, technical obstacles such as electricity supply issues, and constraints in adopting digital technology. Although *Teh Gurah* has entered marketplace platforms, its exposure and utilization of digital media remain low. This highlights the need to strengthen the digital capacity of SMEs to compete in the digital economy era (Ramadhan & Fauziah, 2023).

On the other hand, business sustainability also remains a major concern. Many traditional entrepreneurs still lack a roadmap or long-term strategy for sustainable business development. The lack of derivative product development, such as flavor variants or other dosage forms (capsules, instant powders), hampers market expansion and adaptation to changing consumer preferences (Wijayanti & Zakiyah, 2024). Therefore, strengthening institutional capacity and product innovation should be a key focus in community service activities that promote locally based SME empowerment.

This international community service activity was carried out as part of The 1st International Community Services organized by Sustainable International Community Services (SICS). The initiative aimed to assist and identify various potentials and challenges faced by *Teh Gurah* entrepreneurs in Yogyakarta. In this approach, participatory community involvement is a key factor in ensuring the empowerment process is sustainable and has a direct impact on the local community (Maesaroh & Firmansyah, 2023). Therefore, this paper aims to systematically describe how innovation processes based on local knowledge are implemented through a community service approach, and how the integration of tradition, regulation, and technology can serve as a strategic strength in supporting the sustainability of traditional herbal businesses in Indonesia.

II. METHODS

2.1. Location, time, and subject of community services

The activity took place at one of the production centers of Teh Gurah, located in the Wukirsari Tourism Village, Imogiri District, Bantul Regency, Special Region of Yogyakarta Province. The program was carried out over three consecutive days in May 2025. Prior to the implementation of the program, initial conditions indicated that the production process still relied on simple machinery, there were limitations in product development and utilization of digital media, and no structured long-term plan had been prepared. On the other hand, the business had already obtained distribution permits from BPOM and halal certification, indicating readiness in terms of legal compliance (Nugroho et al., 2024).

The expected outcomes of this activity include the formulation of a business problem and potential map, recommendations for product development strategies based on innovation, and improved digital literacy to support marketplace-based marketing. In addition, this initiative also aimed to create synergy between business actors and supporting institutions to ensure business sustainability and community empowerment based on local potential (Wijayanti & Zakiyah, 2024).

2.2. Data collection methods

Data collection was carried out through direct observation at the production site and semi-structured interviews with business actors. Observation was used to understand the production flow and equipment utilized, while interviews helped explore the perceptions, challenges, and expectations of business actors regarding product development and digitalization (Hidayati & Siregar, 2023).

The sampling technique was conducted purposively, focusing on key business actors and supporting parties who possess in-depth information about the history, production process, regulations, and distribution of Teh Gurah products. Data validity was ensured through technique triangulation, by cross-checking information from business actors with documents and observations conducted. To maintain reliability, each documentation process utilized recording devices and written notes, which were then systematically analyzed (Maesaroh & Firmansyah, 2023).

2.3. Data analysis methods

Data analysis was conducted qualitatively using a thematic approach. Interview results were coded and classified into main themes such as production chain, technical constraints, marketing strategies, product innovation, and institutional support. The results of this analysis served as the basis for formulating recommendations to strengthen business capacity and digitalization strategies (Ramadhan & Fauziah, 2023).

II. RESULT AND DISCUSSION

3.1. The History and Transformation of Gurah Practice into a Herbal Product in Wukirsari

Wukirsari Village, located in Imogiri Sub-district, Bantul—often referred to as Kampung Gurah—has long been known as a center for traditional gurah practices, a method of expelling mucus from the respiratory tract through the application of herbal drops into the nose (Pesona Wukirsari, 2024). This activity has been passed down through generations of local families, including those in Dusun Giriloyo, Karang Kulon, and Cengkehan. The gurah tradition is often associated with healing rituals and relaxation, reflecting a blend of the medicinal properties of herbs—such as sri gunggu leaves—with the spiritual and social aspects of local community life.

In the post-2006 earthquake era, awareness began to grow regarding the need to adapt this gurah method into a form that would be more practical and safer for the public. In this context, descendants of renowned gurah practitioners, such as H. Djawadi, started to develop a version called Teh Gurah, a ready-to-brew herbal tea that retains the detoxifying properties of the traditional therapy while reducing the discomfort associated with nasal application. This approach was formulated as a form of adaptive innovation and commercialization of local knowledge—combining black tea leaves with sri gunggu extract and other herbs—allowing users to enjoy the benefits comfortably, detoxifying through perspiration and bowel movements.

According to data from the village office and tourism database, Teh Gurah has emerged as one of the creative economy icons of Wukirsari Tourism Village, gaining attention since 2024 when the village was named one of the World's Top 55 Tourism Villages by UNWTO. The shift from conventional gurah methods to herbal tea has made it easier for the general public and tourists to experience the benefits of gurah without undergoing invasive procedures. Production is now carried out on a household scale, yet it has reached tens of thousands of packages per month.

Technically, the production process of Teh Gurah involves fermenting BoP black tea for 24 hours, mixing it with blended and dried whole sri gunggu leaves, and packaging it using airtight foil. Each box contains about 15 tea bags (2 grams per bag), packed in airtight packaging that ensures a shelf life of up to two years according to BPOM standards. This standardization is supported by a BPOM-certified production room and halal certification, indicating that the production process complies with food and pharmaceutical regulations.

This transformation has significantly impacted the local socio-economic structure. First, it has created a more modern business model alternative while preserving cultural heritage. Second, it has diversified the livelihoods of community members—where previously many relied on roles as gurah practitioners, they have now shifted to becoming producers and marketers of herbal products. Third, the tourism potential of the village has increased through educational and culinary gurah offerings in tour packages in Wukirsari, believed to expand market reach.

However, this process also faces considerable challenges. According to interviews with local figures, despite increased production of up to around 40,000 boxes per month, the sustainability of the business is still fragile. The absence of a long-term strategic roadmap, the lack of product variants, and technical issues such as power outages add to the vulnerability to market fluctuations and operational costs. Demand has also tended to decline following the surge in purchases during the peak of the COVID-19 pandemic. A 2023 study by Fitriani et al. also highlighted the importance of synergy between traditional adaptation and simple technology combined with digital training, so that local products can survive global social changes. In this context, Teh Gurah holds strategic potential if supported by approaches such as quality management, digital record-keeping, and modern branding.

3.2. Type of Activity

The participatory discussion approach was at the core of the community service activities conducted in Kampung Gurah, Wukirsari, Imogiri, Bantul. This method was chosen for its effectiveness in building balanced, two-way communication between the service team and local business actors. Throughout the program, various small discussion forums and village meetings were held to explore potential, identify challenges, and jointly formulate short- and long-term solutions for the sustainability of the Teh Gurah enterprise. This approach aligns with the principles of Participatory Rural Appraisal (PRA), which emphasizes empowerment through active community participation in designing the changes they need (Ma'ruf et al., 2023).

The first participatory discussion took place in the production room, involving business owners, worker representatives, and village officials. In this forum, the service team facilitated a problem-identification session based on the daily experiences of business actors. One of the main issues that emerged was technical constraints such as power outages and limited production space that met BPOM standards. The forum was then used to jointly formulate concrete recommendations, such as procuring a generator and reorganizing the production space for greater efficiency. The service team acted only as facilitators, while ideas emerged directly from the business actors—demonstrating that the participatory approach fostered a sense of ownership over the solutions developed (Arifin & Widiyastuti, 2022).

Subsequent discussions were conducted through a community walk, visiting the homes of residents who had previously been involved in traditional gurah processing. Through a narrative and semi-formal approach, valuable information was gathered about the cultural transformation of gurah from nasal therapy to herbal tea. Residents expressed their aspirations to remain involved in production activities, even though machine efficiency had reduced the need for manual labor. This encouraged ideas for reskilling residents in packaging, quality control, and digital marketing. These discussions served not only as knowledge transfer platforms but also as social bridges between the older generation of artisans and modern entrepreneurs.

Other discussions were conducted in the form of thematic interviews, such as on digital marketing and product development. In the digital marketing discussion, business actors conveyed their challenges in using marketplaces and social media. The service team then invited participants to discuss alternative solutions based on the practical experiences of fellow SMEs that had successfully reached online markets. One output from this session was the idea to create short video content about the benefits of Teh Gurah as part of a storytelling strategy. This approach aligns with recent studies that highlight its effectiveness in fostering micro-innovation in traditional business communities (Sari et al., 2023).

In the product development discussion, business actors and participants explored possibilities for product diversification. Two main ideas emerged: the development of herbal capsules and instant tea. The service team encouraged participants to jointly map the potential risks and opportunities of each product. The results of the discussions then served as material for formulating a more strategic business roadmap. These discussions demonstrated that the participatory approach not only produces technical solutions but also strengthens the community's strategic thinking capacity. The entire series of discussions concluded with a reflective forum involving village stakeholders: the village head, community leaders, government representatives, and business actors. In this forum, the results of the previous discussions were presented by the business actors themselves, not the service team. This aimed to promote autonomy and confidence among the local community in articulating their needs and future plans. This approach is supported by literature that suggests that active community involvement in policy and business strategy formulation enhances the sustainability and effectiveness of interventions (Putri et al., 2022).

Overall, the participatory discussion approach has created a space for dialogue that is equal, open, and solution-oriented. These forums have built synergy between actors: the community, academia, and government. Such a model can be replicated in other villages that have local potential but have not yet been optimized institutionally or technologically. In the context of the Teh Gurah service program, participatory discussion has shifted the relationship between facilitators and the community from a top-down relationship to an equal collaboration based on mutual learning. Furthermore, this approach opens opportunities for co-creation processes in village innovation. Teh Gurah is no longer seen solely as a cultural heritage product, but as the result of interactive dialogue between locality, technology, and social entrepreneurship. This transformation process serves as evidence that participatory discussion is not merely a method but an effective, contextual, and sustainable framework for social change.

3.3. Challenges and Limitations

In the implementation of the community service program for Teh Gurah in Wukirsari, Imogiri, Bantul, a number of challenges and limitations consistently emerged, ranging from operational to strategic levels. One major issue is the dependence on electricity supply from PLN, which frequently experiences disruptions. The 2023 PLN Sustainability Report noted that although there is a long-term commitment to energy sustainability, electricity availability in some rural areas of Indonesia remains inconsistent. For the Teh Gurah enterprise, power outages directly impact critical processes such as

fermentation, drying, and tea bag printing, all of which require continuous power. Without a backup generator, such disruptions result in decreased production volume and potential deterioration of product quality.

Furthermore, the shortage of skilled human resources also poses a significant barrier to digitalization and innovation development. As highlighted in studies on SME digitalization, digital marketing and digital-based recording systems will not succeed without ongoing training and adaptation of organizational culture. The Teh Gurah entrepreneurs, despite their awareness of the importance of digital financial recording and marketplace management, often face technical difficulties such as using applications and performing basic data analysis. In addition, the cost of technology investment presents a real challenge. Digital transformation requires hardware, software, and stable internet connections—all of which demand funding. Many business actors delay the purchase of equipment such as laptops, printers, and internet modems due to economic constraints, similar to what has been reported by herbal SMEs in Bantul, who noted that despite having received training and mentoring, limited capital prevented the full implementation of digitalization programs..



Figure 1. Final product and production process

Regulatory aspects also present their own pressures, particularly the rigid standards required by BPOM for production facilities. Although the business already holds a distribution permit, the production space remains limited in terms of size and amenities. Every expansion plan—such as the development of herbal capsules—risks being stalled due to strict BPOM requirements. Studies on digital transformation in traditional SMEs emphasize that regulation can sometimes slow scale-up efforts if not accompanied by technical support and government incentives. The issue of poor timing relative to market momentum is also encountered. During the peak of the COVID-19 pandemic, demand for Teh Gurah surged as its detoxifying properties became a major health trend. However, as the pandemic subsided, demand dropped drastically—a temporary spike that was not matched by

diversification strategies to retain market share. This inconsistency in demand reflects the need to shift from a seasonal demand-based model to a more crisis-resilient business model.

The limited capacity for post-program mentoring is another critical factor. Once the community service program ends, access to follow-up training, technical support, or digital marketing assistance tends to be cut off. This aligns with studies in kampung jamu (traditional herbal villages) in Bantul, which report that the effectiveness of SME digitalization programs tends to decline without consistent follow-up and mentoring. From an organizational perspective, there is also resistance to change among traditional actors. Although technology innovation and diversification were discussed during focus group discussions, some actors continue to adhere to old operational patterns, influenced by cultural factors and long-standing habits. Studies of SMEs in Indonesia affirm that digital resilience is insufficient without proper change management and visionary leadership commitment.

Finally, the lack of data utilization as a basis for decision-making hampers business professionalism. The Teh Gurah enterprise does not yet have systems for stock analysis, sales tracking, or customer feedback that are data-driven—despite the fact that modern digitalization requires this to sharpen branding strategies and market segmentation. Overall, the challenges and limitations faced by Teh Gurah span two dimensions: operational (power supply, human resources, regulation) and strategic (digitalization, diversification, sustainability). Addressing these requires comprehensive interventions: provision of backup power facilities, human resource reskilling programs, technology partnerships with universities or digital platform providers, and policy support from local government for production space and marketing. A sustainable mentoring model—not merely a one-time project—also forms the core to ensure that local products like Teh Gurah can survive, grow, and become an effective example of community empowerment in Indonesia.

3.4. Innovation and Sustainability Opportunities

The development of Teh Gurah in Wukirsari opens up a variety of innovation and sustainability opportunities that can be leveraged to strengthen business competitiveness and expand positive impacts for the community. One of the main opportunities comes from the potential of the domestic tea market, which remains large and continues to grow. According to Budiyoko et al. (2024), domestic black tea consumption is still low compared to its potential, creating a significant market niche for locally-based tea products such as Teh Gurah, which is packaged as a premium artisan tea. The combination of BoP black tea leaves and local herbs such as sri gunggu leaves also adds unique value that reinforces the distinctive character of the product.



Figure 2. Discussion Process with Business Actors

In line with the global trend for healthy and natural products, there are opportunities to develop innovative new variants. A study shows that herbal MSMEs can expand their markets through product diversification, such as herbal capsules, instant tea, and healthy flavor variants (ginger, lemongrass, etc.), which can enhance business resilience against shifts in demand. This aligns with the context of Teh Gurah—a platform for introducing innovative variants that meet evolving market needs. Digitalization based on ESG (Environment, Social, Governance) is also a strategic opportunity. Arif Mudzaki et al. (2024) emphasize that integrating ESG into the digital marketing strategies of MSMEs enhances competitiveness and attracts socially and environmentally conscious consumers. Teh Gurah has the potential to serve as a model of a local product that prioritizes sustainable farming practices, eco-friendly packaging, and community empowerment through income-sharing schemes.

From the perspective of the circular economy and community involvement, Teh Gurah could adopt a simple green supply chain model by utilizing processing waste—such as used sri gunggu leaves—as compost for local farming or as raw material for animal feed. This model resembles green supply chain practices among MSMEs in Semarang, which successfully improved environmental and social performance without significantly increasing costs. From a technological standpoint, there is considerable potential for Teh Gurah to develop a prototype for simple digital supply chain management. For instance, implementing spreadsheet-based stock records and online transaction tracking, similar to smart village tools, could facilitate quality monitoring, reduce waste, and enhance operational transparency. This step is in line with the modern SME digitalization roadmap.

Community-based open innovation is also relevant—Teh Gurah could initiate a wave of innovation in collaboration with the tourism village, local farmer groups, food technologists, and universities. This mode aligns with studies on open innovation in social enterprises, which show that collaboration accelerates product development and social sustainability. For example, the development of instant herbal variants in Wukirsari could involve students from UGM or UPI as participatory R&D teams. Another opportunity arises from the phenomenon of tight-knit local tourism. Wukirsari is already known as a tourism village, allowing Teh Gurah to be formulated as an educational attraction product—herbal-themed products offered in tour packages, herbal culinary workshops, or even as educational souvenirs. This aligns with the growing domestic and international trend of wellness tourism.

From a business model perspective, Teh Gurah has potential similar to CV BMB in artisanal tea studies, with a business model canvas focused on niche markets, brand differentiation, and a clear value proposition related to health and locality. This approach provides a foundation for developing stronger marketing strategies, ranging from positioning the value of local and herbal ingredients to small-scale export market expansion. In terms of governance, adopting the principles of sustainable innovation, as discussed by Verkuijil et al. (2024), will encourage Teh Gurah to design internal policies that encompass the use of local raw materials, the efficiency of eco-friendly production processes, and quality standardization. This also strengthens the product's social and ecological value, enhancing its legitimacy in the eyes of environmentally conscious consumers.

IV. CONCLUSION

Based on the results of observations, focus group discussions, and direct interactions with business actors and the community in Kampung Gurah, it can be concluded that this community service program successfully promoted local wisdom-based innovation as a strategic strength in the empowerment of traditional SMEs. The innovation of gurah therapy, which was originally

administered nasally, has now transformed into a more hygienic, practical, and widely accepted herbal tea product. This activity has had a significant impact on enhancing the capacity of business actors, particularly in understanding the importance of certification, BPOM-standard production management, digital marketing, and long-term business planning. The local community has also directly benefited through job creation, the strengthening of local cultural identity, and increased collective awareness of the economic potential rooted in tradition.

To improve the effectiveness of similar programs in the future, several strategic steps are recommended: (1) the need for integrated and continuous mentoring from universities and local government, (2) strengthening digitalization and financial training using simple applications, (3) facilitating market research to support the development of new product variants, and (4) building a sustainability roadmap involving the community and supporting institutions. This initiative has also resulted in a new model of approach for the empowerment of traditional SMEs based on local innovation, formulated as the principle of Culturally Embedded Participatory Innovation (CEPI)—a model of empowerment that combines active community participation, utilization of local wisdom, adaptation of simple technologies, and synergy among institutions. This model has the potential to be further developed as a prototype for community service programs oriented toward sustainability and local community-based competitiveness

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