

## DIGITAL EMPOWERMENT AND PRODUCT INNOVATION FOR MSME COMPETITIVENESS A CASE STUDY OF RANTING AYA

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### ABSTRAK

UMKM Ranting AYA menghadapi tantangan serius dalam daya saing akibat keterbatasan dalam produksi, kemasan, dan promosi digital. Penelitian ini bertujuan mengatasi hambatan tersebut melalui pendekatan kolaboratif berbasis Participatory Action Research. Intervensi yang dilakukan meliputi penyediaan alat produksi (vacuum sealer dan penggiling daging), pengembangan kemasan yang lebih menarik dan fungsional, serta pelatihan promosi digital menggunakan Canva dan Instagram. Hasil penelitian menunjukkan peningkatan efisiensi produksi hingga 30%, perluasan jangkauan pasar melalui media sosial, serta penguatan identitas merek melalui desain kemasan personal. Studi ini menunjukkan bahwa perubahan kecil, strategis, dan terjangkau mampu memberikan dampak signifikan bagi keberlangsungan dan daya saing UMKM.

Kata Kunci: UMKM, promosi digital, desain kemasan, efisiensi produksi, pemberdayaan

### ABSTRACT

*MSME Ranting AYA faced critical competitiveness challenges due to outdated production tools, ineffective packaging, and limited digital promotion capabilities. This study aimed to address those barriers through a collaborative, field-based intervention guided by Participatory Action Research. The interventions included providing production tools (vacuum sealer and meat grinder), redesigning functional and attractive packaging, and delivering digital promotion training using Canva and Instagram. Results showed up to a 30% increase in production efficiency, expanded market reach via social media, and enhanced brand identity through personalized packaging. This study affirms that small, strategic, and cost-effective changes can generate significant and sustainable improvements in MSME competitiveness.*

**Key words:** MSME, digital promotion, packaging design, production efficiency, empowerment

## INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) form the foundation of Indonesia's economic landscape, contributing 60.51% to the national GDP and employing 97% of the total workforce (BPS, 2022). Their significance is undeniable, yet many MSMEs continue to face persistent challenges—including limited access to financing, a lack of managerial skills, and slow adoption of digital technologies (Mulia & Sulungbudi, 2019; Maulida & Yunani, 2017). These barriers often hinder growth and restrict their ability to compete effectively in a rapidly evolving market.

Ranting AYA, a small enterprise based in Bandung Regency, exemplifies these struggles. Like many MSMEs in Indonesia, it grapples with inefficiencies in production, minimal marketing outreach, and product packaging that lacks appeal. These limitations are not uncommon but highlight a broader need for targeted, practical interventions that address both managerial and technological gaps.

According to OECD (2021), digital transformation is a crucial driver of resilience and growth for small businesses, especially in developing economies. Similarly, Vial (2019) defines digital transformation as a process that reshapes an organization's value creation through the integration of digital technologies. These perspectives are particularly relevant to MSMEs that must quickly adapt in the post-pandemic era.

This study focuses on a central problem: the limited competitiveness of Ranting AYA due to outdated manual production methods, unattractive and inefficient packaging, and low digital literacy

in marketing. These constraints prevent the business from expanding its market reach, optimizing its operations, and enhancing product appeal—challenges commonly faced by many MSMEs in similar settings.

Recognizing the vital role of MSMEs in achieving sustainable economic development, particularly in line with the Sustainable Development Goals (SDGs), efforts to transform these enterprises are increasingly essential (Halim et al., 2024). Prior research suggests that combining digital empowerment with managerial innovation can significantly enhance MSME resilience and competitiveness (Mulia & Marlencia, 2021; Sanjaya & Nuratama, 2021).

Framed as an applied research initiative rooted in community service, this paper adopts the structure and rigor of academic inquiry while leveraging insights from field-based implementation. Rather than merely reporting activity outputs, the manuscript systematically examines how low-cost, targeted interventions can address structural inefficiencies in MSMEs.

This study explores how digital tools and product innovation can serve as strategic levers for improving MSME performance. The novelty of this study lies in its integrative approach to addressing production, packaging, and promotional challenges in a resource-constrained MSME environment. It draws from relevant literature while offering a grounded case application that reflects real-world constraints and practical outcomes. Through a focused case study of Ranting AYA, the paper proposes a framework for implementing accessible, cost-effective interventions tailored to the unique constraints of small enterprises in developing

contexts. This paper details the steps taken to redesign packaging, develop digital marketing content, and introduce efficient production tools to the enterprise. It evaluates the impacts of these efforts on Ranting AYA's competitiveness and provides insights into practical, scalable approaches that similar MSMEs can adopt.

## METHOD

This study draws on the framework of Participatory Action Research (PAR), which emphasizes collaborative inquiry and intervention within real-world settings. PAR is particularly suited for addressing practical problems faced by marginalized or underserved groups, such as MSMEs with limited access to institutional support. According to Bradbury and Reason (2022), PAR fosters democratic participation and co-creation of knowledge between researchers and participants, making it ideal for research embedded in community empowerment contexts.

To investigate the competitiveness challenges faced by Ranting AYA—specifically in manual production methods, outdated packaging, and low digital literacy—this study employed a qualitative, participatory action research design. The methodological approach emphasized the co-creation of practical solutions while maintaining academic rigor, aiming to generate transferable insights for other MSMEs with similar constraints.

A. Preparation Phase: A site visit was conducted to Ranting AYA, a home-based MSME located in Bojongsoang, Bandung Regency. Through field observations and semi-structured interviews with the business owner, the study identified

operational bottlenecks in three key areas: labor-intensive meat processing, unappealing and impractical packaging, and an absence of structured digital promotion. These findings echoed existing literature on MSME development challenges.

B. Implementation Phase: Based on the diagnostic findings, context-specific interventions were deployed:

- Production: A vacuum sealer and meat grinder were introduced to improve hygiene, efficiency, and reduce production time.
- Packaging: Standing pouches with improved sealing and a newly designed brand logo were implemented to enhance both the functionality and aesthetic appeal of the products.
- Promotion: The MSME received capacity-building sessions using Canva for visual design and Instagram for social media engagement, enabling consistent and visually cohesive digital promotion.

C. Evaluation Phase: The effectiveness of the interventions was assessed through direct comparison of operational practices before and after implementation. Although precise quantitative metrics (e.g., revenue, output volume) were not captured, qualitative indicators such as production speed, packaging quality, and social media engagement provided strong evidence of improvement. Feedback from the MSME owner further validated the perceived value and applicability of the interventions.

Primary data were collected through direct field observations and semi-structured interviews with the business owner. No

secondary datasets were used in this study. By aligning identified barriers with targeted actions, this methodological framework bridges practical implementation with analytical insight. The participatory nature of the approach reinforces its replicability across MSMEs operating under similar conditions of limited resources and digital exposure.

## RESULTS AND DISCUSSION

The following subsections present the results across the three focal areas identified during the methodological phase: packaging development, digital promotion, and production efficiency. These findings are critically examined to assess their relevance to MSME competitiveness and contribution to the economic development literature.

The study found that Ranting AYA experienced not only technical improvements but also increased confidence and market orientation. Observational data and feedback from the owner suggested that customers responded positively to the new packaging, often commenting on its more professional appearance. This not only improved shelf presentation but also led to greater willingness among retailers to display the product.

Although formal tracking was not conducted, qualitative evidence indicated that the time needed to prepare and package 50 products decreased from approximately 2 hours to 45 minutes. The vacuum sealer extended the product's shelf life from 1–3 days to 5–7 days at room temperature. In digital outreach, the owner reported an increase in WhatsApp inquiries and a more organized content calendar on Instagram. These improvements demonstrate how accessible digital tools and modest design upgrades can translate into real

operational advantages. The results across the three focal areas identified during the methodological phase: packaging development, digital promotion, and production efficiency. These findings are critically examined to assess their relevance to MSME competitiveness and contribution to the economic development literature.

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In digital promotion, the business owner began implementing weekly content schedules, actively managing Instagram stories and posts. She reported an increase in inquiries through WhatsApp and a broader audience reach, consistent with findings from Jasri et al. (2022). These activities reflected a fundamental shift in promotional behavior, from reactive to proactive engagement.

Production tools, particularly the vacuum sealer, significantly reduced processing time. Previously, manual sealing caused fatigue and hygiene issues. After the intervention, preparation became more streamlined, allowing the owner to focus on product variety and delivery. These operational shifts contributed to better time management, higher perceived product quality, and a more structured workflow.

1. Packaging Development and Product Image

One of the most tangible changes was the redesign of the product packaging. By switching from basic plastic wraps to vacuum-sealed and standing pouch packaging, the enterprise enhanced both the shelf-life and aesthetic appeal of its products. The new design included brand elements, such as a logo featuring the owner's name, which strengthened product identity and consumer trust. The new logo, developed specifically for the brand's subline Dapoer Enin, incorporated an illustrated likeness of the owner, enhancing authenticity and differentiating it from competitors who often use generic stock imagery. The updated packaging also introduced functional elements such as vacuum-sealed bags and standing pouches with cap embossing, designed to prevent contamination, spillage, and unauthorized sampling in stores. Custom packaging was also developed for on-site sales events, tailored for ready-to-eat formats and snack items like mie lidi. This finding aligns with Kotler and Keller's (2016) theory that packaging functions as a silent salesman and plays a crucial role in shaping consumer perception (Maricar et al., 2023; Purnomo et al., 2025).

2. Digital Promotion through Social Media Training sessions and hands-on coaching in Canva and Instagram helped the MSME develop its digital presence. With regular content planning and scheduling, Ranting AYA gained confidence in maintaining its brand visibility online. According to Riyanto (2023), social media platforms like Instagram and WhatsApp are vital for MSMEs in Indonesia to reach wider audiences. Literature supports that digital marketing

can significantly improve consumer reach and engagement (Jasri et al., 2022; Purwana et al., 2017). The Instagram account (@ranting.aya) was optimized with a new visual style, including curated highlights, scheduled weekly posts, and an engaging content calendar. This visual consistency and planning not only improved perceived professionalism but also contributed to increased customer engagement, as evidenced by rising WhatsApp inquiries and broader social reach.

3. Production Efficiency through Technology Adoption

The use of a meat grinder and vacuum sealer drastically improved production efficiency by reducing manual labor time and enhancing hygiene. Although quantitative production data was not collected, qualitative feedback from the owner indicated a noticeable reduction in preparation time. This supports findings by Heizer et al. (2020) that appropriate technology adoption in micro-businesses leads to improved workflow and output consistency. These results also echo the practical benefits found in similar interventions (Mulia & Marlencia, 2021; Putri, 2019). Additionally, the introduction of the vacuum sealer extended product shelf life from 1–3 days to approximately 5–7 days at room temperature, significantly reducing product loss and returns. The meat grinder eliminated the need for outsourcing to traditional markets, reducing contamination risks and improving hygiene standards. According to the MSME owner, these improvements allowed her to increase production volume by up to 30%, while maintaining

quality control in-house. The estimate of a 30% increase in production volume was based on the business owner's testimonial and field observations rather than formal tracking.

#### 4. Contribution and Novelty

This study is based on a single case and therefore its generalizability is inherently limited. The outcomes may vary depending on factors such as product type, market characteristics, and the entrepreneurial profile of the business owner. Nevertheless, the insights offer a meaningful reference point for similar micro-enterprise contexts.

This study contributes to MSME development literature by demonstrating that even minimal, low-cost interventions—when aligned with the specific operational context—can lead to measurable improvements in competitiveness. The novelty of this work lies in its integrative, field-driven approach that combines packaging innovation, digital literacy, and production efficiency within a single, replicable framework. It expands existing discourse by offering an empirical example of how action-oriented research can directly impact under-resourced MSMEs without requiring high financial investment or prolonged incubation programs.

#### CONCLUSION

This study demonstrates that integrating low-cost digital tools and targeted design interventions can significantly improve the competitiveness of MSMEs operating in constrained environments. The case of Ranting AYA illustrates how practical solutions—such as packaging redesign,

digital marketing training, and basic production equipment—can lead to tangible improvements in efficiency, product appeal, and market reach.

Importantly, the changes implemented in Ranting AYA reinforce the idea that effective transformation in MSMEs does not necessarily require complex or expensive interventions. Small, simple, yet strategic adjustments can yield significant and sustainable outcomes. This insight challenges the assumption that only large-scale investments lead to business growth, offering a more accessible model of empowerment for small enterprises.

The participatory, field-based approach adopted in this study contributes to the growing discourse on grassroots MSME transformation by emphasizing local adaptability and minimal resource dependency. These findings have practical implications for policymakers and development practitioners aiming to empower small businesses without requiring complex or capital-intensive programs.

Future research may explore the long-term sustainability of such interventions and investigate their applicability in different cultural and industrial contexts, particularly among women-led or informal-sector MSMEs in other regions.

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