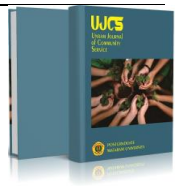
UJCS 7(3) (2026)

Unram Journal of Community Service

https://jurnalpasca.unram.ac.id/index.php/UJCS



Capacity-Building Assistance for Kenjeran Cracker SMEs Focused on Enhancing Competitiveness Through the Marketing Mix, Sustainable Business Management, and Energy-Efficient Drying Machines

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Article Info
Received : August 20, 2026
Revised: August 31, 2026
Accepted: September 25, 2026
Published: September 30, 2026

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DOI: 10.29303/ujcs.v7i3.1847

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Abstract: This community service activity aims to enhance the competitiveness and sustainability of Bu Pina's Crackers MSME in Kenjeran, Surabaya, through the application of appropriate technology, strengthening the marketing mix, digital marketing, and improving business management and financial accounting capabilities. The partner's main challenges include a cracker drying process that still relies on sunlight, limited marketing efforts—which are still conducted offline and through bulk sales to middlemen—suboptimal product packaging, and the absence of business financial record-keeping. The implementation method involved observation, coordination, training, mentoring, and the application of appropriate technology in the form of a *low*-voltage cracker drying machine. The results of the activity demonstrated an increase in the partner's capacity in the drying process, product packaging and labeling, marketing through the Shopee and TikTok marketplaces, as well as simple business management and financial record-keeping. Products that were previously sold in bulk began to be developed in packaging that was more informative and attractive, while the marketing strategy evolved from an offline system to a hybrid approach. This initiative demonstrates that the integration of appropriate technology, the marketing mix, digital marketing, and strengthened business management can serve as a strategy to enhance the competitiveness, efficiency, professionalism, and sustainability of Bu Pina's Cracker MSME.

Keywords: Cracker SMEs, Marketing Mix, Appropriate Technology, Business Management.

Introduction

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in supporting community economic growth through job creation, income generation, and the development of local economic potential. One processed food product with significant development potential is Kenjeran crackers. Kenjeran crackers are a processed product that not only holds economic value but also represents local food potential that can be developed into a regional flagship product. However, amid increasingly fierce competition in the food sector, MSMEs producing kenjeran crackers still face various challenges, particularly in marketing, sustainable

How to Cite:
Sa'diyah, H., Roosmawarni, A., Irmawanto, R., Amroni, M. K., Azahra, F., Putri, R. A., & Maya, V. E. D. (2026). Capacity-Building Assistance for Kenjeran Cracker SMEs Focused on Enhancing Competitiveness Through the Marketing Mix, Sustainable Business Management, and Energy-Efficient Drying Machines. *Unram Journal of Community Service*, *7*(3), 302–306. https://doi.org/10.29303/ujcs.v7i3.1847

business management, production process efficiency, and product quality improvement.

Strengthening the competitiveness of these SMEs therefore requires an integrated approach that focuses not only on increasing production but also on marketing and sustainable business management. The integration of marketing mix strategies, sustainable business management, and the implementation of energy-efficient drying machines is expected to improve production process efficiency, maintain consistent product quality, expand market reach, and enhance the ability of MSME operators to manage their businesses sustainably. This approach is also in line with the need for MSMEs to adapt to technological developments and changes in consumer behavior.

Method

Micro, Small, and Medium Enterprises (MSMEs) play a strategic role in supporting community economic growth through job creation, income generation, and the development of local economic potential. One processed food product with significant development potential is Kenjeran crackers. Kenjeran crackers are a processed product that not only holds economic value but also represents local food potential that can be developed into a regional flagship product. However, amid increasingly competitive food markets, kenjeran cracker MSMEs still face various challenges, particularly in marketing, sustainable business management, production process efficiency, and product quality improvement.

Strengthening the competitiveness of these SMEs therefore requires an integrated approach that focuses not only on increasing production but also on marketing and sustainable business management. The integration of marketing mix strategies, sustainable business management, and the implementation of energy-efficient drying machines is expected to improve production process efficiency, maintain consistent product quality, expand market reach, and enhance the ability of MSME operators to manage their businesses sustainably. This approach is also in line with the need for MSMEs to adapt to technological developments and changes in consumer behavior.

Result and Discussion

This community service activity began with observations and coordination with a partner—a cracker-making SMEs operator in Kenjeran, Surabaya. The observations conducted by the community service team led to the decision that the mentoring would be carried out in collaboration with Bu Pina, the owner of the cracker-making SMEs. While Bu Pina's cracker business has long-term growth potential, it faces intense market competition. Therefore, the implementation of a marketing mix and sustainable business management is expected to enhance the competitiveness of Bu Pina's cracker SME, enabling the business to continue growing and contributing to the improved well-being of the surrounding community.

The main challenge frequently faced by the owners of Bu Pina's cracker SME is weather changes, which have a significant impact on sales revenue. This occurs because the cracker drying process is still carried out using conventional methods—namely, sun-drying on available open land. Admittedly, the drying areas are sometimes located near densely populated residential areas. When the rainy season begins, it is certain that the drying process will take a long time, thereby slowing down the order fulfillment process for middlemen. The conventional drying process is an ineffective and inefficient method, as it not only takes a long time but also erodes middlemen's trust due to orders missing deadlines, requires a larger drying area, and poses hygiene risks because the product is highly susceptible to bacterial contamination. The following illustrates Mrs. Pina's conventional cracker drying method:



Figure 1. The Cracker Drying Process before Cutting



Figure 2. The Cracker Drying Process after Cutting Cutting

Through a series of coordination efforts between the community service team and the target partners, an agreement was reached that the mentoring process would focus on the utilization of appropriate technology, specifically a cracker-drying machine. The use of this appropriate technology is expected to provide an alternative solution to the challenges faced by Pina's cracker MSME business owners, particularly during the rainy season. In line with the principles of sustainability management, the cracker drying machine is designed to use low-voltage electricity, making it more environmentally friendly because it produces no carbon dioxide (CO_2) emissions, has low carbon emissions, and does not contribute to noise pollution. The use of low-voltage technology is the best solution to prevent

operational costs from rising and to ensure that sales revenue can continue to increase. The following is a low-voltage electric cracker dryer that can be utilized by Bu Pina's cracker SME business owners:



Figure 3. Low-Voltage Cracker Dryer



Figure 4. TTG: Electric Cracker Drying Machine

The types of crackers produced by Bu Pina's SME business include four flagship products: (a) Fish Crackers, (b) Shrimp Crackers, (c) Kupang Crackers, (d) Lorjuk Crackers, and (e) Squid Crackers. Until now, Bu Pina's cracker production has been sold in bulk to middlemen or resellers who come to purchase, so the seller cannot set her own prices. The prices charged by the middlemen to the business owner are very low, as the middlemen must rebrand and repackage the products to ensure the final market price remains competitive.

Furthermore, the sales strategy employed by Bu Pina's MSME cracker business has so far been limited to offline sales, which inevitably results in a very limited market reach. The consumer base for Bu Pina's crackers is limited to middlemen who make repeat purchases, making it very difficult to attract new customers. Concerns have been raised that this limited market share could negatively impact the business's sustainability, as the products lack innovation and are limited to the four varieties of crackers currently produced.

Therefore, one of the activities in this community service initiative is to help the owners of Bu Pina's MSME cracker business sell their finished products directly through online marketplaces. The crackers are sold in bulk, as shown in Figure 5 below:



Figure 5. Bu Pina Crackers in Bulk Packaging

After undergoing a series of mentoring sessions to address issues related to the implementation of the marketing mix, the following activities were carried out:

1. Packaging Label Design

   Labeling is an integral component of the marketing mix—specifically, the "product" element (Mardiah, Putri, and Sono, 2024). The activity of designing packaging labels for Bu Pina's crackers was carried out to ensure the agreed-upon product labels provide clear information, serve as a brand identity, and attract consumer interest, as shown in the following figure:



Figure 6. Bu Pina Crackers Label Design

The product label includes additional information regarding the production facility's location and a phone number to facilitate repeat orders by consumers. Furthermore, the use of an attractive label design serves as an effective promotional tool, thereby enhancing consumer trust in the product and preventing counterfeiting by other MSME crackers businesses.

2. Bu Pina Cracker Product Packaging

   This community service initiative also included training on product packaging design for Bu Pina's cracker SME business owners, as effective packaging design can significantly impact sales and business sustainability (Danarahmanto et al., 2020; Daulay, 2026), enabling them to create more appealing packaged products and market them on social media and online marketplaces. The crackers, packaged and ready for sale both online and offline, come in two varieties: an uncooked variety and a ready-to-eat variety, as shown in Figure 7 below:



Figure 7. Packaging for Bu Pina's Crackers

3. Online Marketing Training
   Online marketing is crucial because it enables businesses to reach a vast market quickly and cost-effectively. Through the use of devices and the internet, products can be viewed by potential buyers anytime and anywhere, without geographical limitations (Anwar, 2026; Indartuti, 2026). Online marketing training was provided to the owners and employees of Bu Pina's cracker MSME so that business owners could understand the benefits of shifting their marketing strategy from an exclusively offline approach to a hybrid model (online and offline). The training focused on building an understanding of online marketing by utilizing e-commerce platforms such as Shopee and TikTok. These two platforms were chosen because they are the most popular e-commerce platforms in Indonesia (Maheswara, 2026).

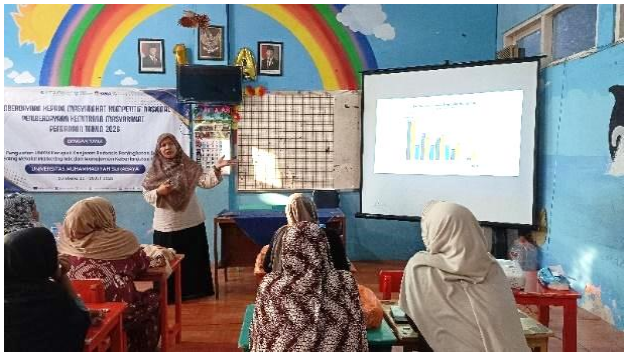


Figure 8. Online Marketing Training

Following the training, participants also received assistance in marketing Bu Pina's crackers online via Shopee and TikTok. This mentoring was provided intensively to enable them to conduct online marketing independently. As a result, the SME entrepreneurs behind Bu Pina's crackers were able to sell their products through these e-commerce platforms and have already secured customers.

4. SME Business Management and Financial Bookkeeping Training
   Business management training and mentoring were also provided to help participants understand how to manage their businesses so they can remain sustainable and operate effectively. In addition to business management guidance, the program included training on maintaining simple financial records of income and expenses, as well as ensuring that business funds are kept separate from personal funds. According to, providing training in business management, marketing, and financial bookkeeping enables MSMEs to manage their businesses efficiently and effectively, as well as to market their products and implement financial bookkeeping so they can determine the profits generated by their businesses. The business management and financial bookkeeping training and mentoring in this program were conducted as shown in the following figure:



Figure 9. Business Management & Financial Bookkeeping Training for MSMEs

Through this training, it is hoped that the owners of Bu Pina's cracker MSME will be able to run their business more professionally and transparently. Although these partners are long-time business owners without formal higher education, they now at least understand and are implementing how to manage their business more professionally. As for financial bookkeeping—which had never been done at all until now—they even felt that their business had never yielded any results, even though the family's sole source of income comes from this cracker business to meet daily needs, pay for their children's schooling, and even renovate their home to make it nicer. Given these circumstances, this study provided very basic bookkeeping training so they could determine their monthly profits.

Conclusion

Based on the implementation of the community service activity at Bu Pina's Cracker MSME in Kenjeran, Surabaya, it can be concluded that the mentoring program has provided solutions to several key problems faced by the partner, particularly in the areas of

production processes, marketing, packaging, and financial management. The problem of conventional drying, which is highly dependent on weather conditions, was addressed through the use of appropriate technology in the form of an energy-efficient drying machine that is more effective, efficient, low-emission, and helps ensure the sustainability of the production process.

In terms of marketing, the mentoring—through the implementation of a marketing mix—led to improvements in product label and packaging design. Products that were previously sold in bulk have begun to be developed into products with more attractive and informative packaging, thereby enhancing brand identity, consumer trust, and broader marketing opportunities.

Training and mentoring in online marketing have also driven a shift in partners' marketing strategies—from relying solely on offline sales to a hybrid approach (offline and online) through platforms like Shopee and TikTok. This mentoring not only provided partners with the necessary knowledge but also helped them begin marketing their products independently via e-commerce and attract online buyers.

In addition, training in business management and basic financial bookkeeping has helped partners understand the importance of separating business and personal finances, recording income and expenses, and calculating business profits. As a result, partners are expected to manage their businesses more professionally, transparently, effectively, and efficiently, while also having a solid foundation of financial information to support business sustainability.

Overall, this community service initiative demonstrates that a combination of appropriate technology, the marketing mix, digital marketing, packaging development, and strengthened management and financial record-keeping can serve as a comprehensive approach to enhancing the competitiveness and sustainability of the Bu Pina Crackers MSME. Ongoing guidance remains essential to ensure that the implementation of technology, digital marketing, and financial record-keeping proceeds consistently and yields long-term impacts on improving productivity, revenue, and the well-being of the partners.

Acknowledgments

The implementation team extends its deepest gratitude and appreciation to the Directorate of Research, Technology, and Community Service (DRTPM) through BIMA at the Ministry of Education, Culture, Research, and Technology (Kemendikbudristek) for the support and funding provided for the implementation of the 2026 Community Partnership Program (PKM). This funding has enabled the implementation team to carry out mentoring and empowerment activities for the "Kerupuk Bu Pina" MSME through the application of appropriate technology, strengthening the marketing mix, digital marketing, packaging development, and capacity building in management and financial record-keeping.

Gratitude is also extended to the Institute for Research, Innovation, and Community Service (LRIPM) at Muhammadiyah University of Surabaya for its support, facilitation, coordination, and guidance throughout the implementation of the " " community service program. Appreciation is also extended to the partner SME, Kerupuk Bu Pina, for its active participation and support throughout the entire series of activities.

May the cooperation and support provided continue to foster the development of research, innovation, and community service activities that bring tangible benefits to enhancing the competitiveness and sustainability of MSMEs, as well as the well-being of the community.

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