



## Challenges of Making Processed Food - Case Study of the Instant Rice Industry CV Mitra Berkah

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### Abstract:

**Background.** The instant rice industry in Indonesia faces various challenges, ranging from lower competitive prices to organoleptic quality and food safety issues. This study examines these challenges through a case study of CV Mitra Berkah, an instant rice producer in Bandung. Through mentoring that focuses on the Standard Operating Procedures (SOPs) of the Occupational Safety and Health Management System (OHSA), food hygiene, and digital marketing strategies.

**Aims.** This study aims to identify challenges, evaluate the effectiveness of interventions, analyze the impact of marketing, and provide recommendations.

**Methods.** The research methodology combines qualitative and quantitative approaches using observation, interviews, and document analysis.

**Result.** The results show an increase in awareness of K3 and hygiene, product quality assurance, and a 60% increase in sales turnover in six months through digital marketing.

**Conclusion.** This study confirms the importance of integrating sound production practices and adaptive marketing strategies to sustain MSMEs in the processed-food industry.

**Keywords:** Instant rice, MSMEs, CV Mitra Berkah, OHSA, food hygiene, digital marketing, processed food.



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## INTRODUCTION

The processed food industry in Indonesia continues to grow rapidly, in line with changes in people's increasingly modern and fast-paced lifestyles. Instant rice, as a practical food product, has great potential to meet the needs of emergency food logistics,

supply individuals with high mobility, and serve as a fast food solution for busy urban communities (Ma et al., 2021; Temgire et al., 2021). These products are expected to simplify the food preparation process, offer convenience, and be time-efficient, especially in contexts where the time to cook traditional foods is increasingly limited (Nurhasan et al., 2024; Rozi et al., 2023). Rice is a major contributor of calories and protein for the Indonesian population, accounting for approximately 52-55% of the total daily calorie intake (Rozi et al., 2023).

Despite having promising market potential, the development and marketing of instant rice in Indonesia face various significant challenges. The main challenges include the relatively high price of the product compared to conventional rice, the Indonesian market's lack of readiness for instant rice products, and problems related to organoleptic quality, such as texture and appearance, that are not optimal (Costlow et al., 2025; David & Ardiansyah, 2016). Instant rice is often difficult to compete with stall rice, which ranges from Rp2,000 to Rp5,000 per serving (Li et al., 2024). In addition, technical issues during processing, such as starch retrogradation that affects texture and prolongs rehydration time, are also obstacles (Denchai et al., 2019; Perdon et al., 1999). For example, instant rice products in Indonesia from Garuda Food still require a rehydration time of 8 minutes, which is considered not to meet the instant criteria by Hubeis, which is maximum 5 minutes (Jiang et al., 2025).

In general, the food processing industry faces a dilemma between maintaining nutritional value and ensuring food safety, as processing can lead to the formation of toxic compounds or the loss of nutrients (Van Boekel et al., 2010). High-temperature processing, although effective at killing microbes and inactivating enzymes, can affect the product's sensory and nutritional properties. The potential for microbiological hazards, such as *Bacillus cereus* and *Staphylococcus aureus*, in cooked rice products is also a serious concern for food safety (Rodrigo et al., 2021).

CV Mitra Berkah, as one of the producers of "Nasi Instan Pa Tani," "Nasi Kuning Instan PA TANI," and "Nasi Liwet Instan Rasa Teri PA TANI," represents MSMEs in Indonesia that seek to address the needs of this market [19]. With a location on Jl. Cikadut, PIRT, and LP certifications, POM Halal CV Mitra Berkah has the opportunity to contribute to food security and the local economy [19]. However, as an MSME, CV Mitra Berkah faces similar challenges, ranging from optimizing the production process and improving product quality to developing effective marketing strategies to compete in a

competitive market [1]. Therefore, the case study on CV Mitra Berkah will provide a comprehensive overview of the challenges faced by MSMEs in the instant rice industry and the solutions that can be implemented.

Research on instant rice, both globally and nationally over the past decade, has been dominated by food technology approaches, particularly in process optimization (soaking–steaming–drying, freeze-drying), starch characteristics, rehydration time, sensory quality, and nutritional value. These studies have emphasized technical challenges, such as starch retrogradation, less favorable texture, and longer shelf life, which have contributed to low consumer acceptance.

The latest literature on food safety emphasizes the microbiological risks associated with cooked and ready-to-eat rice products, particularly highlighting contamination by *Bacillus cereus* and *Staphylococcus aureus*. This underscores the critical importance of implementing Good Manufacturing Practices (GMP) and maintaining food hygiene throughout the production chain. However, most research continues to focus on medium- to large-scale industrial or laboratory settings. Concurrently, research on processed food micro-, small-, and medium enterprises (MSMEs) in Indonesia explores additional dimensions such as digital marketing, branding, and post-pandemic turnover, identifying digital marketing as a key instrument for enhancing their competitiveness. Integrative studies connecting improvements in production systems, occupational safety (OHSA), food safety, and digital marketing strategies remain scarce.

Consequently, the current state of research reveals fragmentation in studies: food technology, food safety, occupational safety (OHSA), and digital marketing are generally examined in isolation rather than as an integrated system within the context of instant rice MSMEs.

## **LITERATURE REVIEW**

Based on the literature review and the findings of this study, several critical research gaps exist:

1. Limitations of integrative studies on processed food MSMEs. Most previous studies separated the study of process technology, food safety, OSHA, and marketing. However, little research has examined the synergy among these four aspects within a single operational framework for MSMEs.

2. The lack of empirical evidence on the impact of OHSA on the business performance of OHSA food MSMEs is generally studied from the perspective of occupational safety, not as a factor that contributes to product quality, brand image, and sales increase.
3. Lack of longitudinal studies on instant rice MSMEs. Research on the gradual change in the performance of MSMEs in the instant rice industry after intervention (production–HR–marketing) remains limited, especially with measurable turnover data.
4. Consumer trust studies based on hygienic production processes. MSME marketing literature rarely links hygiene, food safety, and certification narratives as the main content of digital marketing strategies.

The main novelty of this research lies in the integrative and applicative approach based on MSME case studies, with the following characteristics.

1. Integration of OHSA, food hygiene, and digital marketing. This study not only discusses product quality and marketing in part, but also integrates Standard Operating Procedures (SOPs) based on OHSA, food hygiene practices, and digital marketing strategies as an intervention package.
2. Mentoring-based research approach. Unlike purely descriptive or experimental research, this study uses a direct mentoring approach for MSMEs, resulting in real outputs in the form of POB documents, improved employee competency, product rebranding, and active digital marketing channels.
3. Empirical evidence of short-term economic impacts. This study presents quantitative proof of a  $\pm 60\%$  increase in turnover over six months, a finding rarely reported in studies of instant rice MSMEs in Indonesia.
4. The specific context of the instant rice industry of Indonesian MSMEs. The focus on CV Mitra Berkah provides a strong contextual contribution to the literature, especially regarding the real challenges faced by instant rice MSMEs in addressing issues of price, quality, food safety, and consumer trust.

This study fills an essential gap in the literature by presenting a model for strengthening instant rice MSMEs based on the integration of safe production systems, food hygiene, and digital marketing, which is not only academically relevant but also applicable to the development of food MSMEs in Indonesia.

## **METHOD**

This study used a qualitative case study approach supported by quantitative data.

The case study method was chosen to explore the implementation and impact of mentoring activities on MSMEs CV Mitra Berkah, as well as the challenges faced in the instant rice industry.

### ***Types and Approaches to Research***

**Qualitative Approach:** Used to descriptively analyze the implementation of OHSA POB, employee competency improvement, and digital branding and marketing strategies. Qualitative research is conducted in natural settings.

**Quantitative Approach:** Used to measure the impact of increased sales turnover as a result of digital marketing interventions, presented in the form of data and graphs.

### ***Location and Research Subject***

**Location:** CV Mitra Berkah, an instant rice producer on Jl. Cikadut, Bandung.

**The subjects** were business owners and employees of CV Mitra Berkah who were directly involved in the production process, implementation of OHSA, and marketing activities.

### **Data Collection Methods**

**Participatory Observation:** Direct observation of the instant rice production process, the implementation of OHSA POB, and marketing activities at CV Mitra Berkah. These observations include equipment use, work procedures, and employee interactions.

**In-Depth Interviews:** Conducted with owners and employees to obtain detailed information about operational challenges, responses to training, perceptions of changes after the implementation of POB, and *feedback* related to marketing strategies.

**Document Analysis:** Review the prepared POB documents, training materials, and company sales data from January 2025 to June 2025. The POB document covers procedures for various machines and processes, such as *rice mill*, rice washing, *autoclave/steamer*, *deep fryer*, *filling*, *sealer*, *forklift*, *manual bag handling*, QC chemical handling, QC glassware use, LOTO, and work at height.

**Literature Study:** Collection of secondary data from scientific journals, articles, and regulations related to the instant rice industry, food safety, OHSA, and MSME digital marketing.

### **Data Analysis Techniques**

**Qualitative data analysis:** Case study analysis techniques were used, including data reduction, data presentation, and conclusions drawn. Qualitative data from interviews and

observations will be grouped according to relevant themes.

**Quantitative Data Analysis:** Sales turnover data were analyzed descriptively to determine trends and percentage increases. Data visualization in the form of graphs was used to facilitate interpretation and show the financial impact of the interventions.

## DISCUSSION

The mentoring activities carried out at CV Mitra Berkah resulted in several significant concrete achievements in production, food safety, and marketing. This output is tangible evidence of the implementation of improvements in MSME operations:

OHSA-based Standard Operating Procedure Document: Preparation of POB documents for all stages of instant rice production, starting from rice mill operation [Master.docx], rice washing [Master.docx], autoclave/steamer [Master.docx], deep fryer [Master.docx], filling [Master.docx], sealer [Master.docx], forklift [Master.docx], manual handling sack [Master.docx], QC chemical handling [Master.docx], use of QC glassware [Master.docx], LOTO [Master.docx], and work at height [Master.docx]. These POBs are designed to ensure that every work activity is carried out safely in accordance with the principles of the Occupational Safety and Health Management System and to minimize the risk of hazards such as slipping, falling, burns, and potential silent killers such as bacteria.

Employee Knowledge and Skills Improvement: A total of 10 employees of CV Mitra Berkah received in-depth training and understanding of the importance of work hygiene, the use of appropriate Personal Protective Equipment [Master.docx], cross-contamination control, and procedures for handling emergency conditions. The training also includes understanding the microbiological hazards of cooked rice, particularly *Bacillus cereus* and *Staphylococcus aureus*, as well as simple Good Manufacturing Practices (GMP) integrated into the production pipeline [Example of Scientific Journal related to Instant Rice report].

New Product Branding and Packaging Design: Implementation of a new packaging design for CV Mitra Berkah instant rice products that is more attractive, informative, and emphasizes the value of "hygienic, healthy, and practical" [Naskah\_Paper\_Revisi\_Isu\_Terkini.docx]. This design also integrates BPOM and Halal labels to increase consumer confidence [Naskah\_Paper\_Revisi\_Isu\_Terkini.docx].

**Table 1: Summary of Output of Mentoring Activities**

No	Main Output	Description
1	OHSA POBs document	Thirteen operational procedures covering all stages of production, from <i>rice mills</i> to work at heights, were implemented, with a focus on hazard control and prevention of work accidents. Including POB in the use of PPE that is specific to each job.
2	Employee training and skills	OHSA and food hygiene training for 10 employees, including the use of PPE, cross-contamination control, emergency handling, and understanding microbiological hazards.
3	New branding and packaging	The product packaging design is more attractive and informative, emphasizing the "hygienic, healthy, practical" aspect, and includes the BPOM/Halal label.
4	Online marketing platforms	Activation of social media accounts and <i>marketplaces</i> to expand market reach with educational content on the production process.

[Insert Table Active Online Marketing Platform: The formation and activation of social media accounts (Instagram and Facebook) and the use of *e-commerce marketplaces* as a new sales channel for CV Mitra Berkah instant rice products [Naskah\_Paper\_Revisi\_Isu\_Terkini.docx]. The uploaded content includes information on hygienic production processes and the benefits of the products.

**Figure 1. Mitra Berkah CV Turnover Trends January-June 2025**

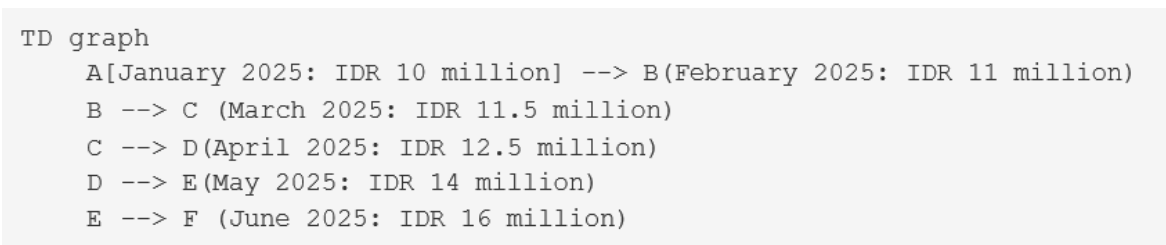


Figure 1 illustrates the upward trend in the monthly turnover of CV Mitra Berkah following the implementation of online marketing support. In January 2025, turnover remained within the IDR 10 million range as sales were primarily conducted through conventional means. From February to March 2025, turnover gradually increased to IDR 11-11.5 million, corresponding to the introduction of products via social media platforms. A more pronounced increase was observed from April 2025 onwards, with turnover reaching IDR 12.5 million in April, IDR 14 million in May, and IDR 16 million in June 2025. This progressive increase demonstrates the positive impact of the online marketing strategies

employed, including social media engagement, e-commerce initiatives, and enhanced packaging designs. Overall, within a six-month period, CV Mitra Berkah's turnover increased by approximately 60% compared to the period before the implementation of online marketing. This indicates that integrating digital marketing with product branding can serve as an effective strategy to enhance the competitiveness and sustainability of food MSMEs.

**Improved Product Image and Competitiveness:** Stronger product branding and "hygienic, healthy, and practical" claims, backed by better production practices, enhance the product's image in the eyes of consumers. It is essential to compete in the instant rice market, which has previously faced price challenges and quality perception issues (Anatan & Nur, 2023; Prabowo et al., 2024).

**Business Sustainability and MSME Empowerment:** This mentoring program not only provides knowledge transfer but also produces real economic impacts. The increase in turnover and professionalism in production capacity contributes to the sustainability of CV Mitra Berkah's business, in line with efforts to empower MSMEs in Indonesia (Prabowo et al., 2024; Yacob et al., 2021).

## **CONCLUSION**

This study concludes that the challenges encountered by instant rice MSMEs in Indonesia are multifaceted, encompassing production efficiency, food safety, occupational safety, product image, and market competitiveness. The case study of CV Mitra Berkah illustrates that addressing these challenges in an integrated manner yields tangible operational and economic benefits to the company.

Furthermore, the integration of digital marketing strategies—supported by enhanced branding and packaging that emphasizes hygienic, healthy, and practical values—has proven effective in increasing consumer trust and expanding market reach. This is empirically reflected in the approximately 60% increase in sales turnover within six months, indicating that digital platforms can serve as powerful leverage for MSMEs when aligned with credible production practices.

Overall, this study confirms that the sustainability and competitiveness of instant rice MSMEs cannot rely solely on technological or marketing interventions in isolation. Instead, a holistic approach that integrates safe production systems (OHS), food hygiene, human resource capacity building, and adaptive digital marketing is essential. The findings contribute to the literature by providing empirical evidence that such integration can directly improve both operational performance and short-term economic outcomes. Consequently,

this model can serve as a practical reference for policymakers, practitioners, and MSME stakeholders seeking to strengthen Indonesia's processed-food sector.

## IMPLICATION

The implementation of OHSA-based Standard Operating Procedures (SOPs) and improved food hygiene practices significantly enhanced employee awareness, workplace safety, and consistency in production processes. These improvements not only reduced potential occupational and microbiological risks but also strengthened product quality assurance, which is critical for ready-to-eat rice products that are vulnerable to contamination and quality degradation risks.

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