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# Application of Risk Management to Food Safety (Case Study of Ayam Geprek Azis in Semarang City)

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**Abstract.** This study aims to explore the application of risk management in ensuring food safety at the micro, small, and medium enterprise Ayam Geprek Azis in Semarang City. The main problem faced by culinary MSMEs is the potential risk to food safety, which has not been systematically managed and may affect product quality and consumer trust. This research employed a descriptive qualitative approach with data collected through observation, in-depth interviews, and documentation. Informants were selected purposively based on their direct involvement in the food production process. Data were analyzed using an interactive model consisting of data reduction, data display, and conclusion drawing. The findings indicate that the primary risks include biological contamination, poor equipment sanitation, and limited worker understanding of personal hygiene. Risk mitigation efforts are conducted informally through habitual practices, but they do not refer to formal standards. The study concludes that although this MSME has not implemented a formal risk management system, it demonstrates initial readiness to adopt a more structured approach, especially with appropriate training and assistance.

**Keywords** : Risk Management; Food Safety; Culinary MSMEs; Processed Foods; Semarang City

## INTRODUCTION

Food safety is a critical global issue in ensuring public health and the sustainability of food systems. WHO emphasizes that food consumed must be free from biological, chemical and physical contamination.

In Indonesia, challenges in maintaining food safety are increasing as the food sector grows, especially in micro, small and medium enterprises (MSMEs). BPOM (2020) explains that food safety includes all efforts to prevent food from potential contamination, and has established guidelines for Good Processed Food Production Methods (CPPOB) as a national standard.

MSMEs have a strategic role in the national economy, contributing around 60% to GDP and absorbing more than 90% of the workforce (Teewan Journal). However, MSMEs in the culinary sector often face obstacles in implementing food safety standards due to limited resources and supervisory systems.

Codex Alimentarius (FAO and WHO, 2020) states that food safety ensures that food is safe for consumption according to its intended use. Unfortunately, many MSMEs have not implemented an adequate risk management system, making them vulnerable to food safety issues.

Risk management is a systematic approach to identifying, assessing, and controlling risks in the production process. According to Hanafi and Halim (2009), the main objective of risk management is to minimize losses and disruptions to business operations. In the context of MSMEs, this approach is important to ensure safe and quality products, although its implementation is still not optimal in many small businesses.

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In Semarang City, Ayam Geprek Azis MSME is one of the culinary businesses with high operational activities and the use of raw materials, putting it at risk of food contamination if not managed properly. Therefore, this study aims to evaluate the extent to which the implementation of risk management contributes to food safety in these MSMEs.

Research by Safi'i, Widodo, & Pangastuti (2020) shows that proper risk management has an impact on improving product quality, reducing customer complaints, and operational efficiency. Meanwhile, Haryani et al. (2022) highlighted that the ISO 31000 framework helps MSMEs be better prepared for disruptions and crises through the process of identifying to monitoring risks. The findings also emphasize the importance of training and the role of leadership in building a risk-aware culture.

Research by Putri et al. (2022) revealed that the lack of structured risk management in culinary MSMEs can reduce consumer confidence and potentially cause financial losses. In addition, the research also stated that most MSMEs do not have systematic risk mitigation plans, so crisis management is often reactive. Thus, the implementation of organized risk management is necessary to minimize threats and maintain food safety standards.

A study by Lokobal et al. (2014) explains that risk management is an ongoing process that includes identifying, evaluating, and controlling risks for operational continuity. In the context of MSMEs such as Ayam Geprek Azis, the implementation of risk management can help recognize and manage potential risks that impact product quality and safety.

## METHOD

This research uses a descriptive qualitative approach with a case study method to explore the implementation of risk management in maintaining food safety at Ayam Geprek Azis MSMEs in Semarang City.

This approach was chosen because it allows researchers to deeply understand the practices of business actors in the real context, and capture social and operational dynamics that cannot be explained through quantitative approaches.

The research was conducted during May 2025. The main focus of the research included risk identification, risk analysis, risk control strategies, and implementation of food safety practices in daily operational activities.

The selection of informants was done by purposive sampling, taking into account the direct involvement of individuals in the production process and business management. The main informants consisted of: business owners, employees, and raw material suppliers (Sugiyono, 2017). Data were collected through observation, in-depth interviews, and documentation. Research instruments included interview guides, note-taking tools, and visual documentation.

Data collection techniques were conducted through three main methods: Direct observation, conducted at food production and serving locations, recording work processes, sanitation, and interactions between employees. In-depth interviews, using semi-structured guidelines to explore the understanding and practices of risk management and food safety from the perspective of informants. Documentation, in the form of photographs, manual records and recordings of relevant business activities.

The data analysis process refers to the interactive model of Miles and Huberman (1994) which consists of three main stages: Data reduction (filtering data relevant to the research focus),

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Data presentation in the form of matrices and thematic narratives, Drawing conclusions and verification continuously throughout the research process.

In terms of the analytical framework, the risk management indicators used refer to the ISO 31000: 2018 standard, namely: Risk identification, Risk analysis, Risk evaluation and control, Monitoring and review, Risk communication and consultation.

Meanwhile, the food safety indicators analyzed refer to the CPPOB (Good Processed Food Production Method) version of BPOM (2020), including aspects of: Quality of raw materials, Cleanliness of production site, Hygiene and behavior of workers, Storage of materials and products, Packaging and labeling procedures.

## RESULTS AND DISCUSSION

This research was conducted at Ayam Geprek Azis MSME located in Sampangan Village, Semarang City, with the main participants being the business owner who also acts as the manager, as well as several employees and raw material suppliers who are directly involved in the operational process.

Data were collected through in-depth interviews, direct observation, and field documentation, then analyzed using the Miles and Huberman model qualitative approach which includes data reduction, data presentation, and conclusion drawing.

From the analysis, two main themes emerged: operational risk management strategies and experience-based food safety practices. The risk management strategies implemented by these MSMEs are adaptive by means of intensive training for new employees, weekly performance evaluations, and direct supervision by the business owner.

Training is provided for two weeks, and only employees who demonstrate proficiency in frying and service are accepted for full-time employment. The owner emphasizes: “If you can't fry chicken or manage orders in two weeks, you're not fit to work here.”

Routine evaluations are conducted in the form of informal internal discussions, either directly during operational hours or through communication groups based on instant messaging applications. This approach indirectly reflects the stages in ISO 31000:2018, especially in the aspects of risk identification, monitoring and control, although it is not formally documented.

Field findings show that cleanliness of equipment and production sites is maintained by washing cooking utensils twice a day. Freezers are used for chicken storage without added chemicals, while seasonings are made in-house and tested for two years to produce consistent flavors. Although they have not yet obtained CPPOB certification from BPOM, this work pattern is in line with the basic principles of food safety.

There are several obstacles, such as the absence of official records of the risk evaluation process and the absence of written procedures in the form of SOPs. This potentially makes it difficult to control in the event of an incident or employee change. Even so, this experience-based approach demonstrates the ability of MSME actors to adapt and contextually absorb food safety practices.

This finding corroborates the results of Safi'i, Widodo, & Pangastuti's (2020) study which states that culinary MSMEs often carry out practice-based risk mitigation without documentation.

In addition, this result is also in line with the research of Putri et al. (2022) which emphasizes the importance of training and leadership in creating a risk-aware culture. In fact, in the context of limited resources, the informal strategy implemented by Ayam Geprek Azis is actually able to produce consistent and safe-to-consume products.

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## CONCLUSION

This study concludes that Ayam Geprek Azis MSME has implemented risk management informally but effectively, through operational habits such as weekly evaluations, hands-on training, and internal discussions, although without following a formal system such as ISO 31000:2018. Steps such as risk identification, control and monitoring have been carried out with a simple, experience-based approach.

In terms of food safety, businesses also show a high commitment to quality and hygiene, from the selection of fresh raw materials, appropriate storage, to attention to worker hygiene, despite not having received formal training or certification such as BPOM's CPPOB.

These findings show that MSMEs with limited resources can still maintain food safety and manage risks independently through commitment, continuous evaluation and understanding of relevant practices, thus supporting sustainable business continuity.

Based on the research findings, it is recommended that MSME players such as Ayam Geprek Azis start documenting the risk management and food safety practices that have been implemented, such as the preparation of simple SOPs, risk evaluation records, and hygiene checklists, to support the training of new employees and as a first step towards certification in the future.

The government and supporting institutions for MSMEs are also expected to provide technical training that is applicable and in accordance with the needs of small business actors, through a case study approach and practical learning media such as videos or visual guides, so that the implementation of risk management and food safety can be carried out more systematically.

For future research, it is recommended that similar studies be conducted in other culinary sectors and different regions to get a broader picture, and consider a quantitative approach to measure the effect of risk management implementation on customer satisfaction or business performance in a measurable manner.

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