

RISK MANAGEMENT ANALYSIS IN THE WALUYO JOYO DRAGON FRUIT COLLECTOR BUSINESS IN BANYUWANGI



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Abstract

This study analyzes internal risk management at Waluyo Joyo, a dragon fruit aggregation MSME in Banyuwangi, Indonesia. MSMEs are crucial to the national economy, yet they often lack formal risk management systems. Waluyo Joyo, despite having stable cash flow, faces sustainability threats due to its highly informal, owner-centric operational model, absence of Standard Operating Procedures (SOPs), and rudimentary financial recording. The research problem is how to prioritize the main risks to ensure the business's sustainability. The objective is to identify and prioritize the key internal risks managerial, operational, and financial using a qualitative case study approach. The method involved in-depth interviews with the business owner and employees, coupled with direct observation. Data were analyzed thematically and assessed based on likelihood and impact to create a risk prioritization matrix. The findings reveal that the most critical risks are managerial and operational. The lack of a formal management structure and written SOPs leads to inconsistent fruit sorting quality, communication gaps, and high dependence on volatile freelance labor. These issues directly cause financial inaccuracies and supplier dissatisfaction. The primary implication is that mitigating the foundational managerial risks is essential for improving operational stability and financial transparency. This study provides a structured framework for the owner to prioritize and address risks, offering a practical model for similar agribusiness MSMEs to enhance their resilience and long-term sustainability.

Keywords: Risk Management, Agribusiness MSMEs, Risk Matrix, Business Sustainability, Fruit Collector

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) are the backbone of the Indonesian economy, contributing significantly to the national GDP and employment. The agribusiness sector, particularly in regions like Banyuwangi Regency, showcases this dynamism, with dragon fruit production seeing a notable 9.71% increase in 2024. This growth underscores the critical role of collecting businesses, such as Waluyo Joyo, which act as essential intermediaries connecting local farmers to broader markets (Banyuwangi, 2024). Despite their strategic importance, agribusiness MSMEs often operate with significant vulnerabilities. A primary concern is the widespread lack of structured internal risk management systems, leaving them exposed to operational, financial, and managerial shocks that threaten their long-term sustainability (Jati, 2023).

Waluyo Joyo, a typical dragon fruit collecting business in Banyuwangi, exemplifies these challenges. While it has maintained stable cash flow and strong social capital with farmers for nearly two decades, its operational framework is highly informal. The business relies entirely on owner-centric decision-making, lacks Standard Operating Procedures (SOPs) for its core sorting process, and maintains ad-hoc financial records using manual ledgers. This informal structure leads to inconsistent product quality, strained supplier relationships, and an inability to accurately measure profitability or losses (Sihotang et al., 2024).

Waluyo Joyo, managed by Mrs. Astatik for two decades, possesses significant financial capacity with a turnover reaching IDR 50 million per harvest cycle. The primary strength of this business lies in its high liquidity management through cash payments to farmers and strong family-like social ties ((Dharma & Syarbaini, 2022). However, behind these advantages, there is a fundamental weakness in the organizational structure, which is highly centralized around the owner (owner-centric). Without a formal managerial structure and with a conventional administrative system still relying on manual ledgers, the business faces a fundamental contradiction between smooth cash flow and weak risk (Jati, 2023). This condition reflects a common phenomenon where high liquidity is not balanced by systematic operational risk management, potentially threatening long-term business sustainability.

This weak managerial system directly impacts operational and financial risks. The absence of standardized Operating Procedures (SOPs) results in subjective fruit sorting processes, leading to inconsistent product quality and triggering complaints from both farmers and buyers (Hasbullah et al., 2022). From a financial perspective, manual recording makes it difficult for the owner to accurately measure actual losses and net margins (Sambodo et al., 2023). Given the complexity of interconnected risks, this research utilizes risk categorization based on probability and impact dimensions to map mitigation priorities objectively. Through this risk matrix analysis, Waluyo Joyo is expected to develop data-driven strategic decision-making to enhance management effectiveness and maintain operational sustainability in a volatile market.

REVIEW OF LITERATURE

Risk management is a systematic process used to recognize, assess, and control various possibilities of events that could negatively impact the achievement of organizational objectives. According to Herman (2019), risk management is the process of knowing,

analyzing, and controlling risks to enhance the effectiveness and efficiency of a company's operations. In the context of MSMEs, the implementation of systematic risk management becomes an urgent necessity to ensure business sustainability (Jati, 2023).

Risk classification is a fundamental step crucial for the analytical phase of this research, is the risk categorization framework by Hopkin (2022). This study explicitly adopts their tripartite model to classify the identified risks in Waluyo Joyo:

Operational Risk: Defined as the risk of loss from inadequate or failed internal processes and people. In this agribusiness context, it is analyzed through the core activity of fruit sorting and the absence of Standard Operating Procedures (SOPs);

Human Resource (HR) Risk: Encompasses threats from failures in human capital management, such as lack of formal training and reliance on volatile casual labor. This is examined as a root cause of operational inconsistencies;

Financial Risk: Relates to threats against financial management capability, analyzed here through the weaknesses in the ad-hoc, manual bookkeeping system and the inability to accurately measure profit margins.

In the context of MSMEs, these three types of risks are interrelated in a cause-and-effect relationship. Human resource risk often triggers the emergence of operational risk, which ultimately impacts financial risk. Research by Sihotang et al. (2024) shows that the absence of SOPs and structured monitoring systems is one of the main triggers of operational risk in small-scale businesses. Meanwhile, research by Jikrillah et al. (2021) confirms that the lack of formal managerial capacity potentially worsens internal risks such as quality fluctuations and process inconsistencies

RESEARCH METHOD

This study employed a descriptive qualitative approach with a single-case study design to conduct an in-depth analysis of internal risk management practices at Waluyo Joyo, a dragon fruit collector business in Banyuwangi, East Java. The qualitative approach was chosen because it enables researchers to understand complex social phenomena within their natural context, emphasizing process and meaning rather than numerical results (Sugiyono, 2019). This methodological orientation is particularly appropriate for exploring how small business owners perceive, interpret, and manage risks in their daily operations, where formal systems are often absent but practical knowledge is rich (Creswell & Poth, 2018).

The research was conducted from September to November 2025 at the main business location in Glagahagung Village, Purwoharjo District, Banyuwangi Regency. This three-month timeframe encompassed the stages of field observation, in depth interview processes, data analysis, and conclusion drawing that produced the final research findings.

Primary data were collected through semi-structured in-depth interviews with six key informants representing different operational roles within the business. These informants included: the business owner as the primary decision maker, two fruit sorting workers responsible for quality assessment, two delivery staff handling distribution, and one field coordinator managing supplier relations. Interviews were conducted using a prepared interview guide while still allowing informants to freely explain their experiences and perspectives (Moleong, 2022).

Secondary data were obtained from documentation of various written records, archives, and documents related to business activities, including manual financial records, transaction notes, and communication archives with farmers and buyers (Creswell & Poth, 2018). Data analysis was conducted using descriptive qualitative analysis with the Miles et al. (2014) model, which includes three main stages. Data reduction was performed through the process of selection, focusing, and simplification of raw data from interviews, observations, and documentation, focused on identifying key statements indicating the existence of risks in business operations (Sulistijanto et al., 2023). Data presentation was done in the form of descriptive narratives and thematic grouping to facilitate researchers in interpreting relationships between risks. Conclusion drawing was conducted through a continuous verification process of identified patterns, where conclusions about risk priorities were drawn based on narrative consensus formed from triangulation of various informants' perspectives.

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To ensure data validity, source triangulation techniques were applied by comparing and cross-checking information obtained from at least two parties directly involved in business activities (Bungin, 2021). Primary information sources consisted of business owners as strategic decision-makers and casual workers as daily operational implementers. This comparison was crucial for observing differences in perceptions between management and field implementers.

Research reliability was maintained through a systematic research process and documentation of each step, from planning, data collection, to analysis, as well as regular supervision by supervising lecturers (Witama & Wono, 2024). This supervision provided continuous guidance and evaluation regarding the accuracy of procedures, consistency of data interpretation, and alignment between findings and research objectives.

Risk priority determination was conducted through risk matrix analysis that categorizes risks based on two main dimensions: probability (likelihood of occurrence) and impact (magnitude of consequences). Through this categorization, each risk was grouped into high, medium, and low priority categories to help business actors understand which risks need to be addressed immediately (Ananta et al., 2024).

RESULTS AND DISCUSSION

Table 1.
Summary of Interview Findings for Risk Management Analysis at Waluyo Joyo

Risk Category	Sub-Category/ Indicator	Key Findings (Quotes & Observations)	Related Informants
1. Managerial	Organizational Structure	The business is managed through a highly centralized, owner-centric model. Decision-making is based on intuition without formal guidelines.	Mrs. Tatik, Mr. Gino
	HR Management	Absence of formal employment contracts; work system based on trust. Recruitment limited to close acquaintances.	Mrs. Tatik, Sul, Dika
	Key Figure Dependency	Operations become chaotic and work instructions are disrupted if key figures (Mrs. Tatik/Mr. Gino) are absent.	Mr. Gino, Yofan, Erwanto
2. Operational	Product Quality (Pests)	"Invisible" fruit fly infestation leads to internal rot. Fruits appear flawless externally but cause "double" losses upon return.	Mrs. Tatik, Sul, Dika
	Standardization (SOP)	No written SOPs. Grading standards (A/B/Reject) are subjective to each worker, causing inconsistency.	Erwanto, Mrs. Tatik, Mr. Gino
	Logistics & Packing	Rudimentary foam packing causes bruising. Lack of vehicle maintenance poses breakdown risks.	Dika, Yofan
	Work Instructions	Instructions are ad-hoc and verbal only. Workers often wait for confirmation before starting.	Erwanto, Dika, Sul

Risk Category	Sub-Category/ Indicator	Key Findings (Quotes & Observations)	Related Informants
3. Financial	Bookkeeping System	Manual recording in notebooks. No digital apps used due to lack of tech literacy.	Mrs. Tatik
	Profit & Loss Analysis	"Rough estimation" only (Cash End vs. Cash Start). No detailed margin calculations.	Mrs. Tatik
	Return Losses	Losses directly reduce cash without structured risk-cost recording.	Mrs. Tatik, Erwanto

Source: Data processed (2026)

The empirical findings from this study reveal significant internal risk vulnerabilities within Waluyo Joyo's operations. Through in-depth interviews and participatory observation, four major risk categories were identified and analyzed using the risk matrix framework. The owner's statement, "We don't have written guidelines, just feeling and experience from the palawija era," (Owner Interview, 2025) clearly demonstrates the ad-hoc management approach that characterizes the business's operations.

Risk Identification and Categorization

Although partially, only responsiveness has a significant effect, the F test shows that simultaneously, responsiveness, empathy, and interpersonal communication affect customer satisfaction. This is evidenced by the R-value of 0.706, indicating a fairly strong relationship between the independent and dependent variables. In addition, the R Square value of 0.499 suggests that these three variables can explain 49.9% of the variation in customer satisfaction. At the same time, the rest is influenced by other factors not included in this research model. Thus, although simultaneously the three independent variables affect customer satisfaction, the partial test results show that only responsiveness has a significant effect. Therefore, to increase customer satisfaction with telecommunication services, companies need to focus more on improving service responsiveness because this factor has been proven to have a significant positive impact.

Table 2.
Risk Identification and Impact Analysis

Risk Category	Specific Risk	Probability	Impact	Risk Level
Operational	Inconsistent sorting quality	High	High	Critical
Managerial	Absence of formal structure	High	Medium	High
Financial	Ad-hoc recording system	Medium	High	High

Source: Data processed (2026)

Interconnected Risk Relationships

The study demonstrates a clear causal relationship between different risk categories. Managerial weaknesses, characterized by the absence of Standard Operating Procedures (SOPs) and formal organizational structure, directly contribute to operational inconsistencies. As noted by one worker, "Sometimes we have different opinions about quality because my sorting knowledge comes from various side jobs," (Erwanto Interview, 2025), indicating how human resource limitations exacerbate operational risks. These operational failures subsequently manifest as financial risks through unmeasured losses and inaccurate profit calculations.

Comparative Analysis with Previous Studies

The findings align with Sihotang et al. (2024) who emphasized that the absence of SOPs and structured monitoring systems triggers operational risks in small businesses. However, this study contributes new insights by demonstrating the specific causal pathways in agricultural collection businesses, where product perishability and quality subjectivity create unique risk dynamics. Unlike manufacturing MSMEs studied by Nuryanti (2024), where operational risks relate more to machine maintenance, Waluyo Joyo's risks stem from human-dependent processes without technological support.

Risk Prioritization and Mitigation Urgency

Based on the risk matrix analysis, operational risks require immediate attention due to their high probability and severe impact on business sustainability. The owner's concern that "if regular buyers get fed up with often receiving poor quality fruits, the business could go bankrupt slowly," (Owner Interview, 2025) validates the critical nature of these risks. This finding supports Jikrillah et al. (2021) regarding the importance of risk prioritization for MSME sustainability, but extends it by providing empirical evidence from the agribusiness sector.

Theoretical and Practical Implications

The results substantiate Hopkin & Thompson (2022) risk categorization framework while providing contextual refinement for agribusiness MSMEs. The identified risk interdependencies challenge conventional linear risk models and suggest the need for integrated risk management approaches in informal business settings. Practically, the findings emphasize the urgency of developing simple SOPs for sorting processes and basic

financial recording systems, which could significantly enhance operational consistency and financial transparency.

The study reveals that managerial informality, while providing operational flexibility, creates systemic vulnerabilities that threaten long-term sustainability. As the owner acknowledged, "We are not a large company with a good system, but this is how we have survived," (Owner Interview, 2025) indicating the tension between traditional practices and modern risk management requirements. This insight contributes to understanding how family-run agribusinesses can transition from inherent risk management to structured approaches without losing their adaptive advantages.

Argumentative Contribution to Knowledge

This research challenges the conventional approach to MSME risk management by demonstrating that in agribusiness collection enterprises, operational risks cannot be addressed in isolation. The evidence shows that treating symptom-level operational issues without addressing root managerial causes yields limited sustainability benefits. The study argues for a holistic risk management paradigm that recognizes the interconnectedness of managerial, operational, and financial risks in agricultural value chains, thereby contributing to the development of more contextualized risk management theories for informal agribusiness sectors

CONCLUSION

This study concludes that Waluyo Joyo's operational sustainability is significantly threatened by interconnected internal risks, with operational risks in the sorting process identified as the most critical. The absence of Standard Operating Procedures (SOPs), formal management structure, and proper financial recording systems creates a chain of vulnerabilities where human resource limitations trigger operational inconsistencies that ultimately manifest as financial risks. The risk matrix analysis provides clear prioritization for mitigation efforts, highlighting that addressing the root causes in managerial practices is essential for sustainable improvement rather than merely treating symptomatic operational issues.

The theoretical contribution of this research lies in its demonstration of the causal relationships between risk categories in informal agribusiness MSMEs, validating and extending Hopkin & Thompson (2022b) risk categorization framework to the specific context of agricultural collection businesses. The findings align with and extend previous research on MSME risk management, particularly building on the work of Sihotang et al. (2024) on operational risk triggers and Jikrillah et al. (2021) on risk prioritization for sustainability. This study also complements the methodological approaches demonstrated in Sulistijanto et al. (2023) and Wono (2020) regarding qualitative analysis in business contexts, while specifically applying these methods to the unique challenges of agricultural collection enterprises. The research challenges linear risk models by revealing how managerial informality directly enables operational uncertainties that compromise financial stability.

Practically, this research provides actionable insights for UMKM owners and supporting institutions by demonstrating how simple, context-appropriate interventions can significantly enhance risk resilience. The development of basic sorting standards, straightforward financial recording templates, and clear role definitions emerge as immediate

priorities for Waluyo Joyo and similar businesses. For policymakers and business development services, the study underscores the importance of tailored risk management approaches that acknowledge the informal nature of these enterprises while guiding them toward more structured operations.

This study acknowledges certain limitations, including its focus on a single case study which may limit generalizability, and its exclusive emphasis on internal risks without comprehensive examination of external market and environmental factors. Future research should explore the implementation and effectiveness of the proposed risk mitigation strategies in similar agribusiness contexts, particularly investigating the transition pathways from informal to formalized risk management practices. Longitudinal studies tracking the evolution of risk profiles as businesses scale would provide valuable insights into the dynamic nature of MSME risks. Additionally, comparative studies across different agricultural commodities could identify commodity-specific risk factors and mitigation approaches, further enriching our understanding of risk management in agribusiness value chains.

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