

Identification and Risk Management Strategy in MSMEs of Vegetable Traders: A Case Study of Pak Marbun at KM 55 Dayun Market

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Abstract

This study aims to identify the various types of risks faced by MSMEs vegetable traders and analyze the risk management strategies applied, with a case study on Pak Marbun's business in the KM 55 Dayun Market. The research method used was qualitative descriptive through direct interviews and SWOT analysis. The results of the study show that MSMEs vegetable traders face market, financial, marketing, operational, human resources, and legal risks. The highest risk identified is the emergence of many new competitors. The main strength of the business is the completeness of the product and the strategic location, while the weaknesses include perishable goods and the absence of financial records. The risk management strategies implemented include focusing on basic necessities, providing alternative goods, and efforts to have supplier reserves. The conclusion of this study is that risk identification and the implementation of appropriate risk management strategies, such as product diversification and financial recording, are crucial for the sustainability of MSMEs and vegetable traders in the face of market dynamics.

Keywords: Risk Management, MSMEs, SWOT Analysis, Risk Management Strategy

INTRODUCTION

Micro, Small, and Medium Enterprises (MSMEs) play an important role in the structure of Indonesia's economy. Based on a press release from the Coordinating Ministry for Economic Affairs of the Republic of Indonesia in 2025, MSMEs will contribute more than 60.5% to the national Gross Domestic Product (GDP) and absorb around 97% of the workforce (Ekon.go.id, 2025). In Riau Province, MSMEs are also the backbone of the regional economy, especially in the trade sector and food industry which are directly related to the basic needs of the community. The role of MSMEs is increasingly vital in the midst of economic uncertainty and global challenges, considering that this sector is known to be more adaptive and resilient in dealing with crises compared to large-scale businesses.

In Siak Regency, the number of micro and small enterprises (MSEs) was recorded at 2,465 units in 2023, making it one of the lowest among districts/cities in Riau Province (BPS Riau Province, 2024). One of the centers of community economic activities in this area is the KM 55 Market, Dayun District, which is the location of the activities of vegetable and daily food traders. Traders in this traditional market generally manage micro-scale businesses with limited capital and human resources. They face various operational risks, such as spoilage of merchandise, price fluctuations, extreme weather conditions, market competition, and limited access to capital.

Unfortunately, most MSME actors in the informal sector still have limited understanding of risk management. In fact, according to data from the Central Statistics Agency, more than 40% of micro and small enterprises (MSEs) in Riau Province face various obstacles, such as difficulties in obtaining raw materials, marketing problems, and limitations in the use of technology (BPS Riau Province, 2024). This study aims to identify the various types of risks faced by vegetable traders in KM 55 Market, Dayun District, as well as analyze the risk management strategies applied in overcoming these challenges. This study is expected to make

a practical contribution in strengthening the capacity of MSMEs to be more resilient, adaptive, and sustainable in facing business dynamics.

LITERATURE REVIEW

1. The Important Role of MSMEs in the Economy

Micro, Small, and Medium Enterprises (MSMEs) have a great contribution to the Indonesian economy. According to the Ministry of Cooperatives and SMEs (2024), MSMEs contribute more than 60% to the Gross Domestic Product (GDP) and absorb up to 97% of the national workforce. The existence of MSMEs is very important because they are able to reach various levels of society and become the main source of livelihood, especially in rural areas and traditional markets. In the local context, such as at the KM 55 Dayun Market, MSMEs such as vegetable traders are a vital part of people's daily economic activities. Micro, Small, and Medium Enterprises (MSMEs) are not only the backbone of the national economy, but also play an important social role in providing jobs, alleviating poverty, and distributing the economy. According to Tambunan (2019), MSMEs in developing countries such as Indonesia are vital in creating economic activities at the local level and strengthening national economic resilience to global crises. The Ministry of Cooperatives and SMEs (2024) reported that the contribution of MSMEs to the national GDP reached more than 60% and absorbed around 97% of Indonesia's workforce.

In addition, MSMEs tend to be more flexible and adaptive to market dynamics, especially in the traditional trade sector such as vegetable traders. They have unique characteristics such as proximity to consumers, the use of social capital (trust, relationships), and deep local knowledge. At the local level, such as at the KM 55 Dayun Market, the existence of vegetable MSMEs is an important part of the regional food distribution system and the provider of staples at affordable prices.

2. Definition of Risk Management

Risk management is the systematic process of identifying, analyzing, assessing, and taking steps to address risks that may hinder the achievement of organizational or business goals. According to ISO 31000 (2018), risk management includes a structured and comprehensive approach to dealing with uncertainty so that organizations can be better prepared and resilient in the face of change. In small businesses such as vegetable traders, risk management is very important because they are vulnerable to many external factors, such as weather, price fluctuations, and capital limitations. According to Vaughan and Vaughan (2020), risk in the business world is uncertainty that can affect business results or goals, both positively and negatively. The implementation of risk management in MSMEs is important because unmanaged risks can have a direct impact on cash flow, stock availability, and business sustainability. In the context of small businesses such as vegetable traders, risks can even occur on a daily basis, such as spoilage of goods or delays in supply.

3. Types of Risks in MSMEs

MSMEs face various risks, including:

- Operational Risk, which is a risk arising from disruptions in daily operational processes, such as delays in goods, goods spoil quickly, or bad weather that hinders sales.

- Financial Risks, include untidy records, lack of financial reports, and reliance on cash.
- Marketing Risks, such as the number of new competitors, changes in market trends, and a decline in consumer purchasing power.
- Human Resources (HR) Risks, which include a shortage of manpower or auxiliary personnel, as well as a lack of skills training.
- Legal risks, such as rising stall rents, changing market rules, or the absence of official permits.

Gitman and Zutter (2021) said that these risks can have a serious impact on business continuity if not handled properly. According to Purwanto and Wicaksono (2021), this risk grouping helps business actors understand which areas are the most vulnerable and need more attention.

4. Risk Identification Process

The first step in risk management is risk identification, which is observing and recording all possible events that can be detrimental to business. This identification can be done through interviews, direct observations, or recording previous experiences. In Mr. Marbun's case study, identification was carried out by recording risks that had occurred, such as arriving late to the market or delays from suppliers that caused empty stock. Widodo and Utami (2023) emphasized that identification must be carried out thoroughly and repeatedly so that business actors do not miss out on new risks. Once the risk is identified, the risk evaluation or assessment stage is carried out by assessing the level of probability (likelihood of occurring) and impact (consequence) of each risk. One of the simple tools that is often used by MSMEs is the 3x3 Risk Matrix. According to Mineur (2022), although it looks simple, this approach can help MSME actors understand risk management priorities quickly and effectively.

5. Risk Analysis and Assessment

Once the risk has been identified, the next step is risk analysis and assessment, which is to measure how big the impact of the risk is and how likely it is to occur. One of the tools that is often used is the risk matrix, for example the 3x3 matrix, which combines the level of likelihood (low, medium, high) and the impact. Mineur (2022) states that although the risk matrix is simple, it can provide a visual understanding of the risk priorities that need to be addressed first.

6. Risk Management Strategy

To reduce the impact of risks, business actors can use several strategies, including:

- Risk avoidance: for example, not selling perishable goods if the weather is bad.
- Risk reduction: such as arranging goods with better packaging so that they do not spoil quickly.
- Risk transfer: such as using insurance services or working with a more reliable supplier.
- Risk acceptance: if the risk is small and tolerable, it is enough to be noted for evaluation.

Hopkin (2021) explained that strategies must be tailored to business capacity and local context.

7. SWOT Analysis in MSME Strategy

SWOT is an analysis tool to evaluate the internal and external conditions of a business. SWOT includes:

- Strengths: such as strategic location and good quality of goods.
- Weaknesses: such as the absence of financial records.
- Opportunities: such as local farmers who can be worked with.
- Threats: such as inclement weather and dependence on suppliers.

According to Sasoko and Mahrudi (2023), SWOT is very effective for strategic planning, especially for micro businesses because it is easy to apply and can help in daily decision-making. SWOT (Strengths, Weaknesses, Opportunities, Threats) analysis is a strategic tool that is often used by MSMEs to evaluate internal and external conditions. Sasoko and Mahrudi (2023) stated that SWOT is very relevant for micro businesses because it is easy to use and does not require special software.

SWOT analysis also helps MSME actors in integrating the results of risk identification into short-term and long-term business planning. For example, weaknesses such as the absence of financial records can be addressed by taking advantage of opportunities such as free digital-based financial applications.

8. The Importance of Digitizing MSMEs in Managing Risk

Digital transformation, such as using simple financial recording applications, social media for promotion, and online ordering platforms, can help MSMEs reduce risks. Prasetyo and Haryanto (2024) stated that MSMEs that start digital tend to recover faster when facing crises and are better able to reach a wider market.

9. Studies Related to MSME Risk Management in the Food Sector

Previous research by Lubis et al. (2020) on risk management in meat traders in the traditional market of Medan showed that the main risks they face are price fluctuations, weather, and capital limitations. They suggest simple management training and financial recording as a form of risk mitigation.

Another study by Wibowo and Anggraini (2022) on processed food MSMEs also concluded that risk management training is able to increase the resilience of small businesses, especially in the face of new competitors and the post-pandemic economic crisis.

10. Development of the Concept of Enterprise Risk Management (ERM) in MSMEs

Enterprise Risk Management (ERM) is a holistic approach to risk management that covers all parts of the organization. According to COSO (2017), ERM creates value by identifying potential events that can impact the organization and managing risks by considering risks and opportunities simultaneously. Although it was initially developed for large companies, the concept of ERM is now being adapted by MSMEs to strengthen the sustainability of their businesses.

Research by Mikes and Kaplan (2015) shows that MSMEs that adopt ERM can gradually integrate risk management into their business strategies, albeit with limited resources. This includes strategic risk management, legal compliance, and operational and reputational risks. The adaptation of the concept of ERM on a small scale encourages MSMEs to create a more systematic risk framework.

11. Comparative Study of Risk Mitigation Strategies in MSMEs in Various Regions

A study by Siregar and Nasution (2022) in North Sumatra revealed that traditional market traders face similar risks as in Riau, namely weather, supply delays, and price competition. However, some MSME actors in Medan have begun to form cooperatives as a collective mitigation strategy to share information, access capital, and strengthen bargaining power for suppliers.

Meanwhile, a study by Handayani (2023) in Central Java shows that MSME actors in the horticulture sector rely on digitalization to monitor price and demand fluctuations in real-time. They use WhatsApp groups and local e-commerce platforms to speed up distribution and reduce the risk of spoilage. These findings confirm that risk mitigation strategies rely heavily on local characteristics and community initiatives.

12. The Role of MSME Support and Incubation Institutions in Risk Management

Support from external institutions such as the Cooperative Office, banks, and business incubators is essential in strengthening the risk management capacity of MSMEs. According to the results of a study by Yusuf and Anwar (2023), MSME actors who have participated in risk management and financial literacy training tend to have higher business resilience.

Incubator institutions such as Rumah MSME Digital Indonesia provide training on the use of financial recording applications, stock planning, and risk scenario simulation. In addition, some CSR programs from regional banks provide access to microinsurance tailored to small business risks, such as crop failure or market fires.

13. The Influence of Local Culture on MSME Risk Perception

Local culture also influences the way MSME actors view and respond to risk. An anthropological study by Nugroho and Dewi (2022) in the Malay region of Riau found that MSME actors often rely on "fate" in dealing with business losses. This makes them more passive and less motivated to implement systematic risk mitigation strategies.

Nevertheless, the cultural approach can also be a strength. The culture of mutual cooperation and mutual help between traders has become social capital in sharing information and strategies to deal with uncertainty. A local culture-based risk management approach can be an alternative in building more contextual risk awareness.

METHODS

This research will be carried out in May 2025 with the object of the study in the form of MSMEs vegetable traders. The research method used is descriptive with a qualitative approach. The data collection technique was carried out through direct interviews with MSME vegetable traders. Furthermore, SWOT analysis is used to identify the relationship between the risk factors faced and the strengths, weaknesses, opportunities, and threats possessed by these MSMEs.

RESULTS AND DISCUSSION

A Brief History of MSMEs Vegetable Traders

MSMEs in the vegetable sector play an important role in meeting the needs of the community and driving the local economy. Mr. Marbun, one of the perpetrators, started his

business independently in Pasar 55 in 2008. He chose to trade vegetables because it was considered easy to run, did not require higher education, and his capital was relatively small. Armed with the support of his family and field experience, his business grew through market understanding and customer relations. At first, competition was still low and sales were quite stable, especially during the rainy season. However, the increasing number of traders in recent years has led to fierce competition, unstable prices, and decreased revenue. Although he has never participated in MSME training, Mr. Marbun has received financial assistance of IDR 2,400,000 which had helped his business continuity. His story reflects the struggle and perseverance of MSME actors in facing the ever-changing market dynamics.

Identify Risks

Risk identification aims to recognize and understand various potential threats that can affect the sustainability of MSME Vegetable Traders' businesses. This process provides a comprehensive overview of the sources of risks that may arise in business operations. Identified risks include:

- 1) Market risk
- 2) Financial risk
- 3) Marketing risks
- 4) Operational risk
- 5) Human resource (HR) risk
- 6) Legal risks

SWOT Analysis

According to Sasoko and Mahrudi, (2023), SWOT analysis is a systematic method used to identify various important factors in the development of an institution. The main objective of this technique is to evaluate internal and external conditions in order to formulate a development strategy that is appropriate to the potential and actual situation.

In its implementation, SWOT analysis is influenced by two types of factors, namely internal and external factors.

1. Internal factors include *strengths and weaknesses*. Identification of these factors usually involves:
 - a. Previous experience, both success and failure
 - b. Financial or budgetary condition
 - c. Availability of resources
 - d. Evaluation of strengths and weaknesses
2. External factors include *opportunities and threats*, which are identified through:
 - a. Environmental conditions
 - b. Applicable policies or regulations
 - c. Emerging trends
 - d. Social, cultural, ideological, and political aspects
 - e. Actual events that impact
 - f. Availability of funds or access to capital
 - g. Technological advancements

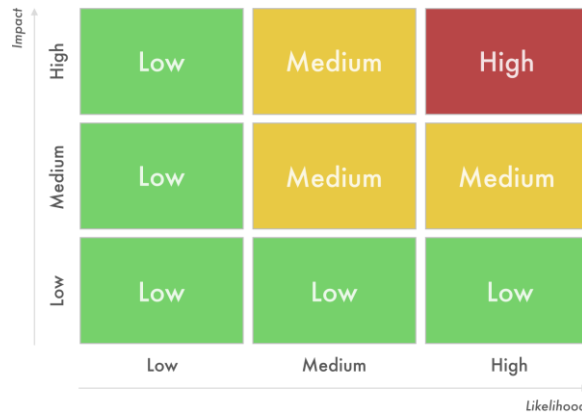
Table 1.1 SWOT Analysis Results of MSMEs Vegetable Traders

No.	SWOT	ANALYSIS
1.	<i>Strenght</i> (Strength)	The goods sold are very complete, ranging from onions, chilies, tomatoes, fresh vegetables and buns, various spices and spices, tofu, tempeh, to rare products such as oyster mushrooms and capri. During Ramadan, seasonal products such as kolang-kaling and grasshoppers are also available.
		The location of the stalls is very strategic, not closed, and is on a path that is crowded with people.
		The goods sold are of high quality because they are not bought in sacks from the toke, but are selected one by one.
		It has many regular customers and is already personally known by buyers.
2.	<i>Weakness</i>	Items perish easily so they must be sold on the same day; otherwise, the next day it must be sold at a low price or in bulk.
		Financial recording is not done due to time constraints, so the actual income is not known for sure. The calculation is only carried out roughly based on the amount of large denominations such as Rp100,000 and Rp50,000, while small bills are not counted.
		The business requires high discipline because traders have to come to the market from 2 a.m. to pick goods; Delays cause the risk of not getting the goods or only getting leftovers.
3.	<i>Opportunity</i> (Peluang)	There are many local ikat vegetable farmers who can work together.
4.	<i>Threats</i>	The influence of the weather, especially when it rains, makes goods difficult to sell and prone to spoilage quickly due to exposure to water.
		Most of the customers are oil palm farmers, so when the price of palm oil falls or the yield is small, their income decreases and has a direct impact on the decline in traders' sales.
		Dependence on suppliers leads to limited stock of goods if farmers or tokes fail to supply. This has an impact on the decline in traders' income, which will only increase if the number of goods sold increases.

Source: Direct interview with business actors (Pak Marbun, 2025)

Risk Assessment

Risk assessment is carried out by analyzing and evaluating potential risks that can have a significant impact on MSME business processes. In this process, a 3x3 risk matrix is used which measures the likelihood of an event and the level of impact. *Likelihood* indicates how likely an event is to occur, while *impact* describes the severity of the consequences caused. This approach is applied, for example, to MSMEs Vegetable Traders to understand the risks faced in a more structured manner.



Sources: (Minor, 2022)

Table 1.2 Risk Identification Results

No.	RISK TYPES	EVENTS	KEMUNGKINAN	IMPACT	RISK LEVEL
1.	Market Risk	Decreased consumer purchasing power	Medium	High	Medium
		Increase in the price of goods	Medium	High	Medium
2.	Financial Risks	No financial records	High	Low	Low
3.	Marketing Risks	The emergence of many new competitors	High	High	High
4.		Delay traders coming to the market	Low	Medium	Low
		Supplier delays	Low	High	Low
		Lack of stock of goods	Low	High	Low
		Bad weather (rain)	Low	High	Low
		Damaged goods	Medium	High	Medium
		Rare and expensive items	Low	Medium	Low
5.	Human Resources (HR) Risks	Labor shortage	Medium	Low	Low
6.	Legal Risks	Increase in stall rent	Low	Medium	Low

Source: Self-processed data based on information from Pak Marbun (2025)

Risk Treatment

Risk management in MSME business activities is an effort to manage risks through the process of identifying, analyzing, and implementing appropriate strategies, in order to reduce negative impacts and maintain business sustainability. A business actor is required to be able to make decisions related to risks, both those that have the potential to occur and those that have occurred. Risks that have arisen must be handled immediately appropriately so as not to interfere with smooth operations. Table 1.3 presents the form of handling each risk that has been identified through the SWOT approach.

Table 1.3 Risk Treatment Table

No.	RISK TYPES	EVENTS	RISK LEVEL	RISK TREATMENT
1.	Market Risk	Decreased consumer purchasing power	Medium	Focus on selling basic necessities such as onions and chili. Avoid stocking up on items that are less in demand.
		Increase in the price of goods	Medium	Provide alternative similar goods with different quality and prices.
2.	Financial Risks	No financial records	Low	Perform simple (manual/digital) recording for all transactions. Create daily and weekly reports for profit evaluation.
3.	Marketing Risks	The emergence of many new competitors	High	Differentiate products or services and maintain quality and service to stay superior
4.		Delay traders coming to the market	Low	Organize a more disciplined operational schedule.
		Supplier delays	Low	Have a backup supplier as an alternative.
		Lack of stock of goods	Low	Confirm the availability of the goods to the supplier (toke) the day before the day of sale.
		Bad weather (rain)	Low	Prepare alternative vehicles/means of transport
		Damaged goods	Medium	Protect items from damage with good packaging
		Rare and expensive items	Low	Create emergency stock if possible
5.	Human Resources (HR) Risks	Labor shortage	Low	Consider hiring a day helper
6.	Legal Risks	Increase in stall rent	Low	Understand the applicable traditional market rules (venue rentals, hygiene policies, etc.)

Source: Self-processed data based on information from Pak Marbun (2025)

- High Risk must be addressed immediately because it has the potential to have a major impact on business continuity.
- Medium Risk needs to be managed properly to reduce the likelihood of risks to MSMEs.
- Low Risk does not require special handling, as it can still be considered through cost-benefit analysis.

CONCLUSION

Based on the analysis of data conducted on MSMEs of Pak Marbun vegetable traders at the KM 55 Dayun Market, various risks were identified, including market risks (decreased consumer purchasing power, increase in the price of goods), financial risks (no financial

records), marketing risks (the emergence of many new competitors, delays of traders or suppliers, lack of stock, bad weather, damaged goods, rare and expensive goods), human resource risk (labor shortage), and legal risk (increase in stall rent). Through SWOT analysis, it was revealed that the main strength of Mr. Marbun's business lies in the completeness and quality of goods and strategic location, but balanced with weaknesses such as perishable goods and the absence of financial records. Opportunities for cooperation with local farmers can be leveraged, while threats such as weather influences and dependence on suppliers need to be watched out. The risk assessment shows that the "emergence of many new competitors" is the highest level of risk. The risk treatment strategy formulated includes product diversification, simple financial recording, and having supplier reserves, adjusted to the level of risk of each to maintain business sustainability.

SUGGESTIONS AND ACKNOWLEDGMENTS

For the development of MSMEs of vegetable traders such as Pak Marbun, it is recommended to start implementing disciplined financial recording, both manual and digital, to accurately monitor profits and assist in decision-making. In addition, it is important to explore cooperation with local farmers to ensure the supply and diversification of products, as well as actively seek information on training or assistance programs for MSMEs to increase business management capacity and adapt to market changes. Thank you to all parties who have contributed to the implementation of this research, especially to Mr. Marbun for his willingness to share information and experience.

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