The Effect of Enterprise Risk Management Implementation on the Sustainable Business Performance of MSME Tapis in Bandar Lampung

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ABSTRACT

The Tapis industry MSMEs in Bandar Lampung City frequently encounter challenges that hinder their survival, growth, and development. These challenges include issues related to human resource capabilities, product innovation, financing, and marketing, which impede their ability to compete, particularly against larger companies. This study aims to assess the impact of various dimensions of Enterprise Risk Management (ERM) on the performance of the creative Tapis industry in Bandar Lampung. Data for the study were collected through a questionnaire and analyzed using simple linear regression analysis, with a sample of 100 MSMEs in Bandar Lampung City. Descriptive analysis of each ERM dimension indicates that, in general, the Tapis MSMEs studied have implemented ERM practices to a satisfactory degree. The results from the simple linear regression analysis reveal a coefficient of determination of 0.191, indicating that 19.1% of the sustainable performance of Tapis MSMEs can be attributed to ERM practices. The significance level obtained is notably low at 0.001, suggesting that the implementation of ERM is effective in enhancing sustainable performance. In conclusion, Enterprise Risk Management (ERM) has a positive and significant effect on the sustainable business performance of Tapis industry MSMEs in Bandar Lampung, particularly in the dimensions of the internal environment, information and communication, and monitoring.

INTRODUCTION

The Micro, Small, and Medium Enterprises (MSMEs) sector, as defined by Indonesian Law No. 20 of 2008, plays a crucial role in the nation's economy. These businesses, operated by individuals or small groups, are often misunderstood as a single entity, when in fact, they are classified based on distinct criteria such as assets, turnover, and employee numbers. For example, micro businesses are characterized by assets up to Rp50 million and an annual turnover of Rp300 million, employing 1-5 workers, while medium enterprises may have assets of up to Rp10 billion, a turnover of up to Rp50 billion, and employ 20-99 workers (Law No. 20 of 2008; Badan Pusat Statistik, 2021). In Indonesia, MSMEs contribute significantly to economic growth, accounting for 61% of the nation's GDP, or Rp9.580 trillion, according to the Ministry of Economic Affairs in 2023. The sector also provides around 60% of total employment in various industries, demonstrating its importance for economic stability and job creation (Beck, 2007; Irjayanti & Azis, 2012). However, the sector

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requires continuous support, particularly in local consumption and policy assistance, to maintain and enhance its development.

Lampung, a province with a rich cultural history, has emerged as a significant player in Indonesia's MSME landscape. The region is known for its thriving creative industries, particularly in the production of tapis, a traditional woven fabric that holds cultural and social significance for the Lampung people (Isbandiyah & Supriyanto, 2019). Despite this cultural richness, many Lampung locals have shown a preference for modern foreign influences, underscoring the need for greater cultural preservation through MSME initiatives (Irhandayaningsih, 2015). The city of Bandar Lampung, in particular, has become a focal point for the development of the creative economy, with the tapis industry playing a pivotal role. The creative industry is defined as one that leverages individual creativity and skills to generate economic value, providing both jobs and cultural preservation (Pangestu, 2008). Bandar Lampung's creative industry, particularly in the tapis sector, consists of 2,819 businesses, contributing Rp1.71 trillion or 11.99% to the city's GDP (Badan Pusat Statistik, 2022). Leading tapis businesses, such as Thasya Ethnic Lampung and Mutiara Sikep, dominate the market, motivating other enterprises to innovate and compete (IKM Tapis Bandar Lampung, 2023).

However, these businesses face several challenges, including intense competition, fluctuating consumer demand, and issues with raw material supply and logistics. Such risks necessitate the implementation of effective risk management strategies to ensure business continuity (Stiadi et al., 2021; Billah et al., 2022). Enterprise Risk Management (ERM), which integrates risk management into an organization's strategic processes, is essential for minimizing these risks and safeguarding business operations (Rofiyandi, 2022). ERM has proven to positively impact business performance, as evidenced by numerous studies linking ERM with improved corporate outcomes (Hoyt & Liebenberg, 2001; Florio & Leoni, 2017). Nevertheless, some research suggests that the influence of ERM on business performance is not always straightforward, indicating the need for further investigation into how ERM affects small and medium enterprises, particularly in creative industries like tapis (Eikenhout, 2015; Agustina & Baroroh, 2016). Consequently, this study aims to assess the impact of ERM on the sustainability of creative MSMEs in Bandar Lampung, providing valuable insights for both academic research and practical business applications.

LITERATURE RESEARCH
A. Risk Management

Risk management involves identifying, assessing, and controlling threats to an organization's resources. It requires a systematic approach to recognizing risks, evaluating, measuring, and managing them. According to Darmawi (2016), risks can't be eliminated but can be transferred or mitigated. The benefits of risk management include preventing company failure, increasing profits, providing peace of mind for managers, and improving public image. The process, as outlined by Hanafi (2014), includes risk identification, where potential hazards are understood, risk measurement to assess severity and likelihood, and risk management strategies such as avoidance, minimization, or transfer to mitigate impacts.

B. Enterprise Risk Management

Enterprise Risk Management (ERM) is defined by the Committee of Sponsoring Organizations of the Treadway Commission (COSO, 2004) as a process involving the board of directors, management, and other personnel to identify potential events impacting the organization and manage risks according to its risk appetite (Mustapha & Adnan, 2015). The COSO ERM Integrated Framework (2017) outlines five core principles: governance and culture, strategy and objective-setting, performance, review and revision, and information, communication, and reporting. Additionally, the framework highlights eight interconnected components, including internal environment, objective setting, event identification, risk assessment, risk response, control activities, information and communication, and monitoring.

C. Performance

Performance, as defined by Basuki Ranto in Sudiarta et al. (2014), refers to the execution of management tasks and responsibilities, determining success or failure in public accountability. Achieving optimal performance requires utilizing resources efficiently, innovatively, and effectively to ensure long-term sustainability, aligned with stakeholder expectations. Innovation is critical in the creative industry, enhancing competitiveness, as customers focus on innovation before reputation (Utami et al., 2013). According to

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Gopang et al. (2017), 14 key indicators evaluate MSME performance, such as reputation, productivity, profit, and innovation. Sustainable MSME performance in Indonesia faces challenges, particularly in technology and financial management (Agustina et al., 2021; Narayana, 2018; Eniola & Entebang, 2015).

D. Micro, Small, and Medium Enterprises

According to Law No. 20 of 2008, MSMEs in Indonesia are defined as productive businesses owned by individuals or entities, classified into micro, small, and medium enterprises. These businesses significantly contribute to the economy, accounting for 61.97% of GDP and 97% of employment (Sasongko, 2020). MSMEs are crucial for equitable economic growth, job creation, and poverty reduction. They are classified into four groups: livelihood activities, micro enterprises, small dynamic enterprises, and fast-moving enterprises. Challenges faced by MSMEs include limited capital, managerial experience, and market access, but development is supported through training, innovation, and partnerships (Alyas & Rakib, 2017).

METHOD

A. Research Object

This research examines the implementation of Enterprise Risk Management (ERM) as a method for evaluating the sustainable business performance of MSMEs in the creative Tapis industry. The focus of the study is on the operational management and the potential risks that may impact the MSMEs in the Tapis creative industry. Through the application of ERM, the study aims to measure how effectively these businesses manage and mitigate risks to ensure long-term sustainability and improved performance.

B. Data Source and Data Collection Method

The data sources for this research are divided into two categories: primary and secondary data. Primary data is collected directly from respondents using questionnaires or surveys. This data is aimed at measuring performance and preventing risks in Tapis creative industry MSMEs in Bandar Lampung, gathered through interviews with competent informants to obtain the necessary research data. Secondary data, on the other hand, is obtained from existing sources, such as consumer needs, literature, articles, and scientific writings relevant to the research topic, which are reprocessed for specific purposes. Data collection methods include the distribution of questionnaires to leaders and front-line managers in Tapis MSMEs, with logically structured questions related to the research problems. The questionnaire surveys are conducted to identify performance levels and risk prevention measures based on the attributes gathered during the interviews.

C. Sampling Method

The sampling method in this research is divided into two parts: population and sample. According to Sanusi (2016), a population refers to a group of elements with specific characteristics that can be utilized to draw conclusions. It includes not just the number of individuals involved in the study, but also the characteristics of the subjects. The population for this research consists of the owners of Tapis creative industry MSMEs. The sampling method used is non-probability sampling with the Snowball Sampling technique, where the initial small sample size grows as participants recommend others to be included in the study, much like a snowball gathering size as it rolls (Sugiyono, 2015). The sample size for this study is set at more than 30 but fewer than 500, specifically 100 samples.

D. Data Analysis Method

The data analysis method employed in this research involves several key tests and analyses. First, the validity test, as described by Ghozali (2021), is used to determine whether a questionnaire accurately measures what it intends to, with the criteria being that if the calculated correlation coefficient (r) is greater than the table value, the data is valid. The formula for calculating this correlation is given, and the test is conducted using SPSS with a significance level of 5%. Second, the reliability test assesses the consistency of the responses using Cronbach's Alpha, with a value above 0.60 indicating reliable data. For further reliability evaluation, the Cronbach Alpha formula is provided. Additionally, simple linear regression analysis is conducted to observe the relationship between the dependent variable (Y) and independent variable (X), with the formula $Y = a + bX$. Finally, the T-test is used to assess the partial effect of the independent variable (Enterprise Risk Management) on the dependent variable (sustainable business performance of Tapis creative industry MSMEs). The hypothesis testing criteria are based on either comparing the t-values or using the significance probability, with a 95% confidence level.

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RESULTS AND DISCUSSION

A. Descriptive Analysis of Business Actors Characteristics

In a study involving 100 respondents from the creative MSME tapis industry in Bandar Lampung, it was found that the majority of the business owners are women (74%). Demographically, most respondents are older, with 64% aged above 32, and the largest proportion (36%) being over 41 years old. Only 1% of the respondents are between 17 and 21 years old. This indicates that the creative MSME tapis industry is largely driven by experienced and mature individuals. From an educational standpoint, 49% of respondents have completed high school or an equivalent level, while 40% hold a bachelor's degree. Despite the relatively lower levels of formal education, these individuals hold a variety of roles in their businesses, such as finance, marketing, production, and leadership. The data also suggests a challenge in implementing Enterprise Risk Management (ERM) due to the limited educational background but highlights the potential for improvement with the existing entrepreneurial drive and adaptability.

Regarding work experience, the study reveals that 74% of respondents have been employed for less than seven years, with 39% having worked for 1-3 years and 35% for 4-6 years. Only 5% have been in the industry for over ten years, which could indicate a need for knowledge retention among the more experienced employees. Furthermore, 87% of the respondents have participated in training programs, showcasing a high commitment to skill enhancement in the tapis industry, though 13% have yet to attend such programs. This underscores an opportunity for expanding training initiatives, which could further enhance productivity and innovation in the creative MSME sector.

B. SEM Descriptive Analysis

The descriptive analysis of Enterprise Risk Management (ERM) implementation within the creative MSME tapis industry in Bandar Lampung reveals an overall positive application of ERM practices. The average scores across eight key dimensions, including internal environment, setting objectives, event identification, risk assessment, risk treatment, control activities, information and communication, and monitoring, indicate satisfactory performance. The dimensions of internal environment (4.10), information and communication (4.11), and monitoring (4.05) scored the highest, suggesting strong awareness and active risk management practices in these areas. However, dimensions like objective setting (3.72) and risk assessment (3.74) scored slightly lower, pointing to potential areas for improvement. While these findings provide a general understanding of ERM adoption, further statistical analysis and comparative studies are needed to fully assess the strengths and weaknesses and their impact on company performance.

Table 1. Average Value of ERM Dimension of Tapis Industry in Bandar Lampung

Dimension	Average
Internal Environment	4,10
Determination of Facilities	3,72
Event Identification	3,79
Risk Assessment	3,74
Risk Treatment	4,02
Control Activities	3,94
Information and Communication	4,11
Monitoring	4,05

C. Performance Descriptive Analysis

The descriptive analysis of sustainable performance indicators for MSMEs in the creative tapis industry in Bandar Lampung demonstrates an overall positive performance. Based on Table 4.6, three key indicators—productivity, efficiency, and profitability—show relatively high average values. Productivity, with an average score of 3.93, indicates that these MSMEs are producing a significant output with available resources, reflecting efficiency in production processes. Efficiency, scoring 3.97, shows that the industry is effectively

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optimizing resource use to maximize results. Profitability stands out with the highest score of 4.12, indicating that most tapis businesses are generating profits, pointing to substantial growth potential and opportunities for further development in the sector.

D. Linearity Test

The linearity test was conducted to determine the nature of the relationship between the Enterprise Risk Management (ERM) variable and the sustainable performance variable. The results indicate that the significance value for deviation from linearity is 0.122. Since this value is greater than the significance level of 0.05, it can be concluded that there is not enough evidence to reject the hypothesis that the relationship between the two variables is linear.

Table 2. Linearity Test

			Sum of Squares	df	Mean Square	F	Sig.
Y * X	Between Groups	(Combined)	6.832	34	0.201	2.133	0.004
		Linearity	2.470	1	2.470	26.208	0.000
		Deviation from Linearity	4.363	33	0.132	1.403	0.122
	Within Groups		6.125	65	0.094		
	Total		12.957	99			

Therefore, it can be assumed that the relationship between ERM and sustainable performance follows a linear pattern.

E. Regression Analysis

After confirming that the regression model meets classical assumptions, such as the absence of multicollinearity and heteroscedasticity, the next step is to conduct a linear regression analysis to examine the effect of the independent variable, Enterprise Risk Management (ERM), on the dependent variable, sustainable performance. Using SPSS software, the regression coefficient indicates that ERM has a positive influence on sustainable performance, with a coefficient of 0.501. The significance test reveals that the impact of ERM on sustainable performance is statistically significant, with a significance value of less than 0.001. Additionally, the R-Squared value of 0.191 shows that approximately 19.1% of the variation in sustainable performance can be explained by the ERM variable. The resulting regression equation is Y = 2.019 + 0.501X + e, where Y represents sustainable performance and X is ERM.

Table 3. Regression Analysis

Model	Unstandarized Coefficients		Standarized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2,019	0,415		4,860	<0,001
ERM	0,501	0,104	0,437	4,804	<0,001
R-Squared	0,191		Adjusted R-Squared	0,182	

F. Determination Coefficient Test

The coefficient of determination test is used to assess how well the independent variables explain the dependent variable. Based on Table 4.5, the analysis shows that the R-squared value of the regression model is 0.191, meaning that 19.10% of the Enterprise Risk Management (ERM) variable affects the sustainable performance of the UMKM creative industry in Bandar Lampung. The remaining 80.90% is explained by other variables not included in the regression model. The R-squared value obtained is lower than that in Yakob's (2019) study, which had an R-squared value of 0.247. This difference may be attributed to Yakob's inclusion of

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additional variables such as firm age, legal status, capital source, and size, along with the eight dimensions of ERM.

G. t-Test

The t-test results show that the independent variable, Enterprise Risk Management (ERM), has a significant influence on the dependent variable, sustainable performance of the UMKM creative industry in Tapis, Bandar Lampung. The calculated t-value of 4.544 with a significance level of 0.001 ($p < 0.05$) supports the research hypothesis, which states that the implementation of ERM improves UMKM performance. These findings align with risk management theory, which emphasizes the importance of identifying, assessing, and addressing risks to achieve organizational goals. This research has practical implications for the UMKM creative industry in Tapis, Bandar Lampung, suggesting the need to increase awareness and implementation of ERM to enhance competitiveness and business sustainability.

CONCLUSION

The study concludes that Enterprise Risk Management (ERM) has a significant and positive influence on the sustainable business performance of the creative Tapis industry MSMEs in Bandar Lampung. The analysis shows that, overall, ERM contributes to improved performance, particularly in the dimensions of internal environment, information and communication, and monitoring, which play the largest role in enhancing business outcomes. This finding suggests that MSMEs with a strong internal structure, effective communication systems, and regular risk monitoring tend to perform better. As for recommendations, it is advised that Tapis MSMEs further strengthen ERM practices, especially in the areas of resource allocation, event identification, and risk assessment to enhance business performance. Future research should explore other variables affecting MSME performance, as the current findings indicate that ERM is not the only influencing factor.

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