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Development of Risk Management Model for Creative Industry: A Cross-Industry Quantitative and Comparative Approach

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ABSTRACT

Creative industries in Indonesia, including PT Kreasi Ngalam Media (AboutMalang.com), contribute significantly to GDP, but face challenges such as dependence on creative individuals, changing market trends, and global economic uncertainty. This research aims to develop a comprehensive risk management model through a survey of 45 respondents, semi-structured interviews, and cross-sector meta-analysis. The findings identified operational, reputational and financial risks, with technical glitches (score 4.2) and reliance on technology vendors (4.1) as the main operational issues. Negative reviews (4.4) were the biggest reputational risk, while dependency on key clients (4.0) stood out as the main financial risk. Suggested mitigation strategies include client diversification, implementation of recurring revenue models, investment in technology, and development of HR competencies. A cross-cutting analysis showed the importance of implementing predictive technology and strengthening infrastructure to enhance the firm's resilience. The developed model brings together operational, reputational, financial, and sustainability risk management, providing strategic guidance that can be applied by PT Kreasi Ngalam Media and other companies in the creative industry to improve competitiveness and business continuity.

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1. INTRODUCTION

The creative industries in Indonesia, including companies like PT Kreasi Ngalam Media (AboutMalang.com), have grown rapidly and significantly contributed to the national digital economy. According to Ministry of Trade of the Republic of Indonesia, this sector accounted for over 7% of Indonesia's Gross Domestic Product (GDP) and is expected to continue expanding due to advancements in technology and digitalization [1]. However, despite its potential, this industry faces considerable challenges, including a heavy dependence on creative individuals, rapidly shifting market trends, and global economic fluctuations that impact business sustainability. Mustapha suggest that these uncertainties necessitate proactive risk management strategies, particularly in businesses that operate in dynamic environments [2]. Klimova argue that companies in the creative sector must continuously adapt to these market dynamics to sustain growth [3]. Similarly, Sobolewski highlight that without flexible and adaptive risk management frameworks, businesses in the creative industry may struggle to maintain competitiveness in a volatile market [4].

Risk management in the creative industry is uniquely complex compared to sectors like manufacturing or technology, where operations are more structured and predictable [5]. Glette-Iversen assert that creative businesses function in highly uncertain environments due to rapidly evolving market trends and technological advancements [6]. Khlystova further elaborates that the industry's reliance on creative individuals increases operational risks, as these individuals are central to innovation yet challenging to retain [7]. According to Mošková, conventional risk management models are often too rigid to address the fast-paced nature of the creative sector [8]. Patrick argue that standard risk mitigation strategies used in other industries fail to capture the fluidity required for managing creative enterprises [9]. Additionally, Bayaga and Sidi examine risk frameworks in manufacturing and technology but fail to address the unique risks creative businesses face [10] [11]. Dharmayanti note the research gap concerning risk management in creative industries, emphasizing the need for models that align with the industry's specific operational challenges [12]. Novakova advocate for industry-specific risk management strategies that enhance resilience among creative enterprises [13].

The demand for a comprehensive and tailored risk management framework for creative industries is evident. This study proposes a mixed-method approach, combining quantitative research with meta-analysis to identify relevant risk factors and mitigation strategies. Balaji highlight the value of quantitative research in identifying industry-specific risks, particularly through stakeholder surveys that reveal key challenges affecting business sustainability [14]. Taques demonstrate that quantitative risk analysis is widely applied in the manufacturing and technology sectors, indicating its potential for application in creative businesses [15]. Additionally, meta-analysis provides an extensive review of existing literature, offering a comprehensive perspective on best practices in risk mitigation [16]. The integration of these methodologies enables the development of an adaptable risk management framework that aligns with the unique demands of the creative industry.

To enhance the relevance and application of the proposed model, this study incorporates a cross-industry comparative analysis. According to Praja, different industries prioritize distinct risk management approaches, with the technology sector focusing on risks associated with rapid innovation and manufacturing emphasizing operational risks [17]. Stål argue that cross-sectoral comparisons provide critical insights into how companies in different industries mitigate risks effectively [18]. Koilakonda supports this notion, asserting that businesses operating in dynamic sectors, such as the creative industry, can benefit significantly from analyzing risk management frameworks used in other industries [19]. By evaluating best practices across sectors, this study aims to develop a model that helps creative enterprises anticipate, manage, and mitigate risks more effectively, ensuring long-term sustainability.

However, this research acknowledges several limitations. First, the study focuses on PT Kreasi Ngalam Media as a case study, which may not fully represent the broader creative industry landscape. While this company provides valuable insights, other creative businesses with different operational models may face distinct risk challenges. Second, quantitative and meta-analysis approaches, while effective, may not capture the full complexity of risk perception and strategic decision-making within creative enterprises. To address these gaps, future research should integrate qualitative methodologies, such as in-depth interviews and longitudinal studies, to gain a more nuanced understanding of risk management practices. Additionally, as Scot highlight, external factors like regulatory policies and economic shifts significantly influence risk management strategies, suggesting that future studies should incorporate these variables for a more holistic perspective [20].

Beyond academic contributions, this research seeks to provide practical guidance for creative industry practitioners. Fahmi and Faeroevik emphasize that effective risk mitigation is essential for ensuring long-term business viability in uncertain market conditions [21] [22]. Given that the creative industry inherently operates with high levels of unpredictability, Manab propose that companies should invest in structured risk frameworks that allow for agility and adaptability [23]. By leveraging the findings of this

study, policymakers and business leaders can develop industry-specific risk management guidelines that foster innovation while minimizing exposure to risks. Additionally, the insights generated from this research can help creative enterprises refine their strategic planning, enabling them to proactively address market fluctuations and enhance their resilience in competitive landscapes.

In conclusion, this study aims to provide an in-depth analysis of risk management strategies tailored to creative enterprises, particularly PT Kreasi Ngalam Media. By employing a mixed-method approach that integrates quantitative research, meta-analysis, and cross-industry comparisons, this research endeavors to develop a robust risk management framework applicable across the creative sector. Carmona-Lavado emphasize that businesses adopting cross-industry insights in their risk mitigation strategies can develop more comprehensive and innovative approaches, leading to greater resilience and long-term success [24]. The findings from this study are expected to serve as a valuable resource for both academic researchers and industry stakeholders, contributing to the advancement of risk management practices in the creative industry and beyond.

2. RESEARCH METHOD

This research uses a quantitative approach with meta-analysis and cross-industry comparative analysis to develop a risk management model that is more relevant to the creative industry, particularly at PT Kreasi Ngalam Media (AboutMalang.com). This research aims to explore and identify the main risk factors faced by this company and compare risk management in the creative sector with other sectors, such as technology and manufacturing. Data will be collected through quantitative questionnaires and semi-structured interviews.

2.1. Research Design

This research uses a quantitative descriptive design with the aim to identify, analyze, and develop a more specific and relevant risk management model for the creative industry. The research was conducted in two main stages:

- 1) Quantitative data collection through questionnaires that will identify and measure employee perceptions related to risk factors faced by the company.
- 2) Qualitative data collection through semi-structured interviews with stakeholders to dig deeper into the risk management and challenges faced by PT Kreasi Ngalam Media.

In addition, a meta-analysis will be conducted to evaluate the results of various relevant studies on risk management in the creative industries and other sectors (such as technology and manufacturing) that may contribute to the development of a more holistic model.

2.2. Population and Sample

The population in this study are stakeholders at PT Kreasi Ngalam Media (AboutMalang.com), including managers, employees, and other stakeholders who are directly involved in risk management and company operations. The purposive sampling technique was used to select samples with the criteria of informants who have in-depth knowledge and experience related to risk management in this company. The number of samples to be taken is 30-50 respondents, consisting of managers, employees, and several external stakeholders who have insight into the risk management process in the context of the company and related industries.

2.3. Research Instruments

The research instrument consisted of two main types of data collection: quantitative questionnaires and semi-structured interviews.

2.3.1. Quantitative Questionnaire

This questionnaire aims to identify and measure the risk factors that are considered the most significant in risk management in the creative industry, with a focus on PT Kreasi Ngalam Media. The questionnaire uses a 5-point Likert Scale to measure the level of respondents' agreement with each statement. Some of the indicators measured in the questionnaire include operational risk, reputational risk, financial risk, and business sustainability.

Table 1. Quantitative Research Instruments

Research Aspects	Indicator	Question Item	Likert Scale (1-5)	Data Source	Reference
Operational Risk	Technical glitches	"Technical glitches such as application crashes often affect content production."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[25]
	Vendor dependency	"Reliance on third-party technology vendors increases operational risk."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[26]
	System failure	"System failures are often the main cause of operational disruptions."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[27]
Reputational Risk	Negative review	"Negative reviews on social media have a significant impact on a company's reputation."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[28]
	Slow response	"Corporate responses to reputation crises often take too long."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[29]
	Communication management	"The company has an effective communication strategy to maintain reputation."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[30]
Financial Risk	Key client dependencies	"Reliance on major clients increases the company's financial risk."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[31]
	Revenue fluctuations	"Revenue fluctuations due to changing market trends have a major impact on business sustainability."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[25]
Business Sustainability	HR Investment	"The company allocates sufficient budget for employee development."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[32]
	Technology modernization	"Investment in modern technology is a priority for the company."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[33]
	Innovation	"Innovation is an important element in the sustainability of the company's business."	1 = Strongly Disagree - 5 = Strongly Agree	Employees	[34]

The questionnaire uses a 5-point Likert Scale [35], with a scale:

Table 2. Likert scale		
No.	Score	Description
1	5	Strongly Agree
2	4	Agree
3	3	Neutral
4	2	Disagree
5	1	Strongly Disagree

Quantitative data obtained through questionnaires will be analyzed using the following formulas:

- 1) Descriptive Statistics To describe the distribution of data, mean, standard deviation (SD), and percentage were used.

Average (Mean) Formula:

$$\bar{X} = \frac{\sum X_i}{n} \quad (1)$$

where:

$\bar{X}$ = average

X_i = individual score

n = number of respondents

Standard Deviation (SD) formula:

$$SD = \sqrt{\frac{\sum (X_i - \bar{X})^2}{n}} \quad (2)$$

Validity Test (Pearson Correlation) To measure the validity of the questionnaire items, the Pearson correlation coefficient is used:

$$r = \frac{n(\sum XY) - (\sum X)(\sum Y)}{\sqrt{[n\sum X^2 - (\sum X)^2][n\sum Y^2 - (\sum Y)^2]}} \quad (3)$$

where:

r = correlation coefficient

X = score of each item

Y = total score

n = number of respondents

Reliability Test (Cronbach's Alpha) To measure internal consistency, the formula is used:

$$\alpha = \frac{k}{k-1} \left(1 - \frac{\sum S_b^2}{S_t^2} \right) \quad (3)$$

where:

α = Cronbach's Alpha value

k = number of question items

S_b^2 = item variance

S_t^2 = total variance

Factor Analysis To identify the main factors from the questionnaire data, factor analysis was used by calculating the Correlation Matrix (R):

$$R = \begin{bmatrix} r_{11} & r_{12} & \cdots & r_{1k} \\ r_{21} & r_{22} & \cdots & r_{2k} \\ \vdots & \vdots & \ddots & \vdots \\ r_{k1} & r_{k2} & \cdots & r_{kk} \end{bmatrix} \quad (4)$$

2.3.2. Semi-structured Interview Guidelines

This interview guideline aims to dig deeper into the experiences and views of managers and stakeholders at PT Kreasi Ngalam Media regarding risk management in the company. Some of the questions asked during the interviews will refer to theories that have been put forward in the literature, involving operational, reputational, financial, and business sustainability aspects.

Table 3: Qualitative Research Instruments

Research Aspects	Indicator	Interview Questions	Data Source	Reference
Operational Risk	Technical glitches	"What are the technical glitches you often experience at PT Kreasi Ngalam Media?"	Manager, Editor	[25]
	Vendor dependency	"How does dependence on technology vendors affect company operations?"	Manager, Editor	[26]
Reputational Risk	Negative review	"How do companies handle negative reviews on social media?"	Chief Editor, Manager	[28]
	Crisis communication	"Does the company have a specific strategy to deal with reputation issues?"	Chief Editor	[29]
Financial Risk	Key client dependencies	"To what extent does dependence on one major client affect the stability of the company?"	Board of Directors, Finance Manager	[31]
	Income diversification	"Are there diversification efforts to reduce dependence on major clients?"	Board of Directors, Finance Manager	[25]
Business Sustainability	Investment in People	"How much does the company invest in employee development?"	Board of Directors, HR Manager	[32]
	Technology modernization	"How do companies plan for technology modernization to support business sustainability?"	Technology Manager	[33]
	Innovation	"Is innovation a company priority? If so, how is it implemented?"	Directors, Managers	[34]

Interviews will be conducted directly using question guidelines that are organized based on risk indicators. Qualitative data from the interviews will be analyzed using thematic analysis.

2.3.3. Data Collection

Data collection will be conducted in two stages:

- 1) The first stage is the collection of quantitative data through questionnaires that will be distributed to a predetermined sample. Respondents will be asked to provide an assessment of the risk factors that they consider most influential to the company's operations.
- 2) The second stage is qualitative data collection through semi-structured interviews with stakeholders directly involved in risk management. These interviews will focus on a deeper understanding of the ways in which risk management is conducted, the challenges faced, and practical experiences in addressing risks in the creative industry.

2.3.4. Data Analysis

Quantitative data obtained from the questionnaire will be analyzed using descriptive statistics and factor analysis to identify the main risk factors affecting the creative industry at PT Kreasi Ngalam Media. The reliability and validity of the instruments will be tested first using Cronbach's Alpha and content validity analysis to ensure the quality of the data obtained. Qualitative data obtained from interviews will be analyzed using thematic analysis techniques. The main themes emerging from the interviews will be grouped to see

existing patterns of risk management, and will be compared with quantitative data to ensure the suitability of the findings. Data triangulation will be conducted to ensure the validity of the research results by comparing findings from questionnaires, interviews, and related literature. A meta-analysis will be conducted at a later stage to evaluate relevant findings from previous studies on risk management in the creative industry and related sectors, such as technology and manufacturing. This meta-analysis aims to identify similar patterns or differences in risk management across sectors, so as to produce a more holistic and adaptive risk management model. This process will be conducted by integrating relevant research results published since 2019, with a focus on studies that use quantitative and comparative approaches.

2.3.5. Cross-Industry Comparative Analysis

To increase the relevance and applicability of the developed model, this research will use cross-industry comparative analysis. In this case, the risk management model found at PT Kreasi Ngalam Media will be compared with models applied in other industries such as technology and manufacturing. This comparison aims to identify elements that can be applied universally and elements that need to be adapted to the specific characteristics of the creative industry. This approach aims to produce a more adaptive and flexible model, in accordance with the needs and challenges faced by creative companies in various sectors.

2.3.6. Reliability and Validity

To ensure the reliability and validity of the research, a triangulation approach will be used, comparing data obtained through different sources and methods. Quantitative data from the survey will be compared with qualitative data from interviews and findings from the meta-analysis. In addition, internal validity will be tested using the construct validity test to ensure that the instruments used actually measure the relevant risk factors. The reliability of the instrument will also be tested with the Cronbach's Alpha test, where it is expected that values above 0.7 indicate adequate internal consistency.

3. RESULTS AND DISCUSSION

3.1. Results

This research aims to develop a more comprehensive and specific risk management model for the creative industry, with a focus on PT Kreasi Ngalam Media (AboutMalang.com). The following are the results of the quantitative analysis, qualitative analysis, and meta-analysis conducted during this research.

3.1.1. Quantitative Questionnaire Analysis Results (Key Risk Factors)

Data obtained through questionnaires distributed to 45 respondents at PT Kreasi Ngalam Media shows that operational risk, reputational risk, and financial risk are the most dominant risk factors. The following are the results of data processing from the questionnaire:

Table 4. Questionnaire Analysis Results

Research Aspects	Indicator	Question Item	Average Score	Standard Deviation	Risk Category
Operational Risk	Technical glitches	"Technical glitches such as application crashes often affect content production."	4,2	0,85	High
	Vendor dependency	"Reliance on third-party technology vendors increases operational risk."	4,1	0,80	Medium
	System failure	"System failures are often the main cause of operational disruptions."	3,9	0,91	Medium
Reputational Risk	Negative review	"Negative reviews on social media have a significant impact on a company's reputation."	4,4	0,76	High
	Slow response	"Corporate responses	4,0	0,85	Medium

Financial Risk	Communication management	to reputation crises often take too long." "The company has an effective communication strategy to maintain reputation."	3,8	0,90	Medium
	Key client dependencies	"Reliance on major clients increases the company's financial risk."	4,0	0,91	High
	Revenue fluctuations	"Revenue fluctuations due to changing market trends have a major impact on business sustainability."	3,7	0,80	Medium
Business Sustainability	HR Investment	"The company allocates sufficient budget for employee development."	3,9	0,83	Medium
	Technology modernization	"Investment in modern technology is a priority for the company."	3,8	0,85	Medium
	Innovation	"Innovation is an important element in the sustainability of the company's business."	4,1	0,79	High

3.1.2. Semi-structured Interview Analysis Results (Qualitative Findings)

Results from semi-structured interviews with 3 leaders at PT Kreasi Ngalam Media provided deeper insights into the practical challenges the company faces in managing risk. The key findings from these interviews are as follows:

Table 5. Interview Analysis Results

Research Aspects	Risk Indicator	Interview Questions	Key Findings	Stakeholders
Operational Risk	Technical glitches	"What are the technical glitches you often experience at PT Kreasi Ngalam Media?"	Technical disruptions occurred due to reliance on third-party technology infrastructure.	Editor
	Vendor dependency	"How does dependence on technology vendors affect company operations?"	Dependence on vendors increases the company's vulnerability to external system failures.	Editor
Reputational Risk	Negative review	"How do companies handle negative reviews on social media?"	The company's response to negative reviews is still not fast enough and effective, requiring improvement.	Chief Editor
	Crisis communication	"Does the company have a specific strategy to deal with reputation issues?"	The company has procedures in place, but needs improvement in execution to address the crisis more quickly.	Chief Editor
Financial Risk	Key client dependencies	"To what extent does dependence on one major client affect the stability of the company?"	Dependence on major clients makes the company highly vulnerable to changes in demand.	Directors
	Income diversification	"Are there diversification efforts to reduce dependence on major clients?"	No significant diversification yet, but there are plans to reduce dependence on one client.	Directors
Business Sustainability	HR Investment	"How much does the company invest in employee development?"	Investment in HR development is high, but there is still a need for improvement in ongoing	Directors

Technology modernization	"How do companies plan for technology modernization to support business sustainability?"	training. The company plans to implement the latest technology to improve operational efficiency.	Chief Editor
Innovation	"Is innovation a company priority? If so, how is it implemented?"	Innovation is key to growth, especially in creating relevant and engaging content.	Directors

3.1.3. Meta-Analysis Results from Related Studies

Based on a meta-analysis of relevant international journals, several key risk factors faced by the creative sector and other sectors were found, which enrich the risk management model to be developed.

Table 6. Meta-Analysis Results from Related Studies

Industry	Key Risk Factors	Key Findings	Source
Creative Industry	Dependence on technology, operational disruption, reputation	Creative industries are particularly vulnerable to technical disruptions caused by reliance on technology and digital platforms. Reputational risk is also very important, with a huge impact from negative reviews on social media and public criticism.	[36]
Technology Industry	Technology innovation, system failure, cybersecurity risk	Risks related to innovation and technology failure are greater in the technology industry. System implementation failures and threats to data security are major challenges.	[37]
Manufacturing Industry	Production risk, dependence on raw materials, distribution risk	Risks in the manufacturing industry are more focused on dependence on the supply of raw materials and risks associated with disruptions in the supply and distribution chain.	[38]
Media & Entertainment Industry	Dependence on major clients, changing market trends, regulatory uncertainty	Media and entertainment companies face substantial risks related to dependence on large clients, rapidly changing market trends, and regulatory uncertainties that may affect operations.	[39]
Technology Industry	Vendor dependency, technology implementation failure	Reliance on third parties and failure to implement new technologies leads to significant operational risks in the technology sector, with far-reaching impacts on customer confidence.	[40]
Creative Industry	Innovation, changing market trends, economic uncertainty	Continuous innovation and adaptability to changing market trends are key elements to survive in the creative industry. In addition, economic uncertainty adds pressure on creative companies to survive and thrive.	[41]
Creative Industry	Business sustainability, reputation crisis, technological change	Technological changes and reputation crises greatly affect the viability of creative companies. Therefore, it is important to have the right mitigation strategies in place.	[4]
Creative Industry	Dependence on creative individuals, project uncertainty	Reliance on creative individuals in key projects increases operational risk and uncertainty.	[42]
Technology Industry	Reliance on new technologies, cyber threats, data privacy	Threats to IT systems and personal data are increasing in the technology sector, leading to a deeper need for cyber risk management.	[43]
Manufacturing Industry	Labor, safety and legal compliance risks	Risks associated with unskilled labor, as well as compliance with safety and quality standards are particularly prominent in the manufacturing sector.	[44]

Table 7. Other Meta-Analysis Results

Industry	Key Risk Factors	Key Findings	Source
Technology Industry	Data security, cyberattack threats,	Data threats and cyberattacks are major	[45]

	speed of innovation	risks affecting innovation and customer trust in the technology sector.
Creative Industry	Dependence on large clients, uncertainty of creative projects	The risk of dependence on key clients and the unpredictability of creative projects mean that companies need to manage risk more effectively. [46]
Media Industry	Reputation crisis, revenue fluctuations, changing regulations	Reliance on old business models and regulatory changes increase risks in media and entertainment. [47]

3.2. Discussion

This research aims to develop a more comprehensive risk management model for PT Kreasi Ngalam Media, focusing on operational, reputational, financial and business sustainability risks. This approach integrates insights from various sectors through meta-analysis, which enriches the company's strategic perspective in facing the increasingly complex challenges in the creative industry.

3.2.1. Operational Risk: System Vulnerabilities and External Dependencies

Technical disruptions, which had an average score of 4.2, pose a serious threat to PT Kreasi Ngalam Media's operational sustainability. The company's reliance on third-party technology vendors carries significant risks, as revealed in the research of John [48]. In the study, it was revealed that companies that rely too heavily on external vendors without having adequate internal controls face an exponentially increasing risk of operational disruption [49]. This is highly relevant to the situation faced by PT Kreasi Ngalam Media, where minor disruptions in the vendor's technology system can cause major delays in content production. This poses a huge challenge, especially since such disruptions affect not only the efficiency but also the reputation of the company [50].

Furthermore, research by Anaba corroborates this threat by highlighting that companies with less resilient technology infrastructure tend to experience longer downtime when faced with system failures [51]. This finding is consistent with the results of interviews with PT Kreasi Ngalam Media's operational team, who revealed that disruptions to applications often take days to fix. This long downtime not only hampers productivity but also has the potential to cause large financial losses. Therefore, strategic steps are needed to reduce dependence on one technology vendor and build a more robust and reliable internal infrastructure, so that the company can survive in the face of potential disruptions [52].

As a mitigation measure, PT Kreasi Ngalam Media can adopt the redundancy technology approach as suggested by Azadegan which highlights the effectiveness of redundancy in minimizing the impact of technical disruptions [53]. By implementing a comprehensive backup system and disaster recovery mechanism, the company can ensure operational continuity even in the face of major disruptions. This also allows the company to be more flexible in responding to technical issues, thereby maintaining operational stability and increasing customer confidence. In addition, investing in human resource training in technology can also be an additional strategy to ensure the company's internal ability to handle various technical challenges in the future.

3.2.2. Reputational Risk: Weak Crisis Strategy

Reputational risk poses a significant challenge for PT Kreasi Ngalam Media, with negative reviews recording the highest score (4.4) as the most pressing threat. Research by Trajković revealed that companies that do not respond to negative reviews in less than 24 hours can experience a 30% decrease in customer loyalty [54]. These findings show the importance of a quick response to a reputation crisis, especially in today's digital era. In the context of PT Kreasi Ngalam Media, internal interviews indicated that delays in dealing with negative reviews often made the situation worse. This reputational impact is even more severe on social media platforms, where the spread of information is rapid and difficult to control if not addressed immediately.

The dynamics of social media provide additional challenges that require a proactive crisis communication approach. Diddi stated that companies that have a well-designed crisis communication strategy are better able to mitigate the impact of negative reviews compared to a reactive approach [55]. This provides an important lesson for PT Kreasi Ngalam Media to design a more systematic and planned response strategy. One concrete step is to establish a rapid response team tasked with handling reputation issues in real-time, as suggested in Patel et al.'s research. With this step, the company can show responsibility and concern for its customers, so that it can reduce the escalation of the crisis before it develops into a major threat.

In addition, the use of reputation monitoring technology is becoming an increasingly relevant solution to this challenge. According to Kream, companies that utilize advanced analytics tools to detect

negative review trends before they go viral can reduce reputational impact by up to 40% [56]. This technology allows companies to proactively identify potential issues, understand customer sentiment, and respond effectively. For PT Kreasi Ngalam Media, integrating this kind of reputation monitoring tool will not only help the company respond faster but also allow them to mitigate losses earlier. This can improve the company's image and maintain good relationships with customers.

In addition, strategic measures such as training human resources in crisis communication are also very important. By engaging employees in training programs that focus on reputation response, companies can ensure that all parties understand the importance of responding quickly and responsively to negative reviews [57]. This strategy not only improves operational efficiency in handling crises but also reinforces a customer service-oriented corporate culture. By combining rapid response, proactive communication strategies, monitoring technology, and adequate training, PT Kreasi Ngalam Media can more effectively address reputational risks, maintain customer loyalty, and maintain a positive image of the company in the eyes of the public.

3.2.3. Financial Risk: High Dependency on Major Clients

PT Kreasi Ngalam Media's dependence on key clients with an average vulnerability score of 4.0 puts the company in a position that is vulnerable to financial disruptions. Qazi revealed that companies that derive more than 50% of their revenue from one major client have a 60% higher risk of experiencing financial disruption in the event of a change in the cooperative relationship [58]. This highlights the enormous challenges companies face in maintaining their financial stability and flexibility amidst changing market dynamics. This dependency not only limits the company's ability to grow but also increases operational risk if a major client reduces the volume of cooperation or terminates the business relationship.

To reduce these risks, diversification of client portfolios is a crucial strategic step. Mustafa showed that diversification can reduce dependency risk by up to 70%, especially if companies also expand their product and service offerings to be more relevant to market trends [59]. For PT Kreasi Ngalam Media, this diversification can be realized through the development of new services such as digital-based solutions, creative marketing for specific sectors, or data-driven services to meet the needs of more diverse clients. With this step, the company not only reduces dependency on key clients but also opens up opportunities to reach new markets and increase revenue.

In addition to client diversification, the adoption of recurring revenue models such as subscription-based revenue can be an effective solution. Lindström noted that companies that adopted this model were able to increase revenue stability by 45% within the first three years of implementation [60]. PT Kreasi Ngalam Media can consider this strategy to create a more stable revenue stream that is resilient to fluctuations in key client demand. By developing subscription services such as monthly creative content packages or exclusive access to digital resources, the company can create long-term relationships with more and diverse clients [61]. This strategy, if implemented together with client diversification, can strengthen the company's position in the face of market challenges and ensure its operational sustainability in the future.

3.2.4. Business Sustainability: Synergizing Innovation, Technology, and People

PT Kreasi Ngalam Media's business sustainability relies heavily on a comprehensive integration of innovation, technology modernization, and human resource development. Innovation is not only related to the development of new products, but also includes internal process updates that allow companies to adapt to market changes, as emphasized by Azmat [62]. In the interviews, it was found that although innovation has become a priority, its implementation is constrained by limited employee training and inadequate technological infrastructure. These conditions indicate the need for a strategic approach to increase the internal capacity of the company so that innovation can be implemented effectively and have a significant impact on business sustainability [63].

Technology modernization is another important pillar in ensuring the operational sustainability of PT Kreasi Ngalam Media. Research by Agarwall shows that the adoption of artificial intelligence (AI) technology can increase operational efficiency by up to 30% in one year [64]. However, the successful adoption of new technology is highly dependent on the readiness of the company's human resources. In the context of PT Kreasi Ngalam Media, interviews with management revealed that the lack of technical training is often a major barrier in optimizing modern technology. To overcome this challenge, companies need to invest in specialized training focused on mastering new technologies, ensuring that employees have the relevant skills to effectively support digital transformation [65].

HR development is a key component that cannot be ignored in the company's sustainability strategy. Research Janna found that companies with sustainable training programs not only showed higher employee retention rates but also recorded overall improved performance [66]. PT Kreasi Ngalam Media can strengthen their training program with a focus on digital technology and creativity to ensure employees are

prepared for future challenges. By engaging employees in training designed to improve technical skills and innovation, the company can build a more adaptive and competitive team. This development not only increases productivity but also creates a work environment that supports continuous innovation, ensuring the company remains relevant in a dynamic market.

3.2.5. Cross-Industry Meta-Analysis (Global Perspective)

Cross-industry meta-analysis provides valuable strategic insights for PT Kreasi Ngalam Media in managing risks and improving competitiveness. Based on the study of Li, creative industries, including companies like PT Kreasi Ngalam Media, have a high vulnerability to technical disruptions due to a heavy reliance on technology and digital platforms [36]. This dependency creates significant operational risks, especially when third-party vendors experience technical issues or system failures. To mitigate this risk, PT Kreasi Ngalam Media can leverage approaches from the technology industry that emphasize predictive technology-based risk mitigation. By using predictive analytics, the company can anticipate potential disruptions before they occur and take the necessary preventive steps [67].

Data security is another issue that needs serious attention, given the increasing threats in the digital world. Yaacob highlighted that threats to data security and technology system failures are major challenges in the technology sector [37]. This is also very relevant for PT Kreasi Ngalam Media, which relies heavily on IT systems to support their operations. The implementation of measures such as strengthening data encryption, sophisticated firewalls, and real-time threat monitoring systems can be effective solutions to protect company data. These measures not only ensure data integrity but also maintain clients' trust in the security of the information they hand over. In addition, employee training on cybersecurity is also essential to strengthen the company's overall defenses.

The media industry provides important lessons related to market volatility, which poses a major challenge to business sustainability. Kovaitè found that dependence on key clients, changing market trends, and regulatory uncertainty are major risks faced by media companies [39]. PT Kreasi Ngalam Media also faces similar risks, especially in terms of their dependence on a few key clients for the company's revenue. To overcome this risk, the company can adopt a client diversification strategy by reaching out to more different market segments. In addition, product diversification through the development of new services relevant to market trends, such as digital or creative-based services, can help the company deal with changes in demand more adaptively.

Cross-sector collaboration opens up opportunities to strengthen risk management while creating mutually beneficial synergies. Lotfi note that vendor dependency and failure to implement new technologies are common challenges in the technology sector. However, strategic partnerships across sectors can help overcome these challenges by accessing a wider range of resources and expertise [40]. In the context of PT Kreasi Ngalam Media, partnering with technology companies can help the company improve its technological capabilities, develop more innovative digital solutions and expand market networks. This kind of collaboration not only supports risk management but also provides a competitive advantage in the market.

A cross-sector approach can also drive innovation and strengthen a company's resilience amid increasingly complex challenges. By learning from the technology and media sectors, PT Kreasi Ngalam Media can adopt a more resilient and adaptive strategy in managing risks. The development of technology-based risk management systems, client diversification, and cross-sector collaboration can be the foundation for creating innovations that are relevant to market needs. This will not only help the company survive in the midst of intense competition, but also open up opportunities for sustainable growth. With an integrated strategy, PT Kreasi Ngalam Media can maintain business sustainability and build a solid foundation to face the future.

3.2.6. Strategic Implications

This research offers profound strategic implications for PT Kreasi Ngalam Media to manage risks more effectively and ensure business sustainability. Dhlamini highlights the importance of an integrative approach in risk management to face complex challenges in the modern business environment [68]. This integrative approach not only manages risks separately but also looks at how operational, reputational and financial aspects are intertwined and affect each other. By adopting this approach, PT Kreasi Ngalam Media can prioritize measures that cover multiple dimensions of risk while ensuring that each mitigation measure provides long-term benefits for the company.

In addressing operational risk, vendor diversification and strengthening internal infrastructure are important strategic steps. Zhao emphasizes that too much dependence on third parties can increase operational vulnerability, especially when technical disruptions occur [69]. To mitigate this risk, PT Kreasi Ngalam Media can implement a vendor diversification strategy to reduce dependence on a single service

provider. In addition, strengthening internal infrastructure, such as investment in technology and technical training of employees, can improve the company's ability to handle operational challenges independently. This not only improves operational efficiency but also helps the company prepare for unexpected disruptions.

Reputational risk also requires a proactive approach supported by advanced technology to prevent greater negative impacts. Jain notes the importance of real-time monitoring of public opinion and management of negative reviews to protect a company's image [70]. PT Kreasi Ngalam Media can establish a crisis response team equipped with social media analytics technology to monitor public opinion continuously. This technology allows companies to detect potential problems early and respond quickly before reputational issues develop into a major crisis. This step not only preserves the company's image but also strengthens relationships with customers through transparency and quick responses to complaints or feedback.

Financial diversification is another important component to ensure the stability of corporate earnings amid market dynamics. García showed that recurring revenue models, such as subscription-based services, can increase revenue stability and reduce the impact of market volatility [71]. PT Kreasi Ngalam Media could consider adopting this model, for example by offering subscription packages for their creative content services or digital products. In addition, investing in market research can help the company identify new trends and untapped business opportunities. With this strategy, the company can design more adaptive measures to maintain financial stability while expanding their customer base.

Integrating insights from various sectors, such as technology and media, enabled PT Kreasi Ngalam Media to develop a more resilient and innovative risk management system. Daraojimba highlighted that a cross-sector approach opens up opportunities to create new strategies that support long-term growth [72]. By combining these approaches, PT Kreasi Ngalam Media can utilize the advantages of different sectors to increase their competitiveness in the market. In addition, a cross-sector approach can also help companies strengthen their position in a competitive market while ensuring business sustainability in the face of increasingly complex challenges. Through this strategy, the company will not only be able to survive, but also thrive in the future.

4. CONCLUSION

This research identified the main risks faced by PT Kreasi Ngalam Media, namely operational, reputational, financial, and business continuity risks, with operational and reputational risks being the most significant. High reliance on third-party technology increases operational vulnerability, requiring vendor diversification and strengthening internal infrastructure. Reputational risk due to negative reviews requires a more proactive crisis communication strategy supported by analytics technology. On the other hand, financial dependence on key clients demands diversification of client portfolio and development of recurring revenue models to enhance stability. Business sustainability depends on innovation, technology modernization, and people training that supports digital transformation. Meta-analysis across sectors provides strategic insights, such as the use of predictive technologies to anticipate technical disruptions and strengthening data security to counter cyber threats. An integrative approach to risk management, which looks at the relationship between operational, reputational, and financial aspects, is key to ensuring the effectiveness of risk mitigation and corporate sustainability in the dynamic creative industry.

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