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In-depth Analysis of Business Risks in the Cattle Livestock Industry: Comprehensive Literature Review

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Abstract
Cattle farming is a vital sector in the livestock industry, but it is also faced with various complex business risks. This literature review aims to provide an in-depth understanding of the risks associated with cattle farming. Through a thorough analysis of various literature sources, we explore the main aspects that influence risk in the cattle industry, including external factors such as fluctuations in feed prices, changes in government policies, and market uncertainty, as well as internal factors such as livestock health, financial management, and operational efficiency. By thoroughly understanding these risks, cattle farmers can develop effective mitigation strategies to increase the resilience of their business amidst the challenges facing the cattle farming industry.

Keywords: risk, cattle, commodities, livestock.

INTRODUCTION

The cattle farming industry is a vital sector in the global economy, making a significant contribution to food supply and animal protein resources (Popp et al., 2016). Cattle are not only a source of meat and dairy products, but also provide raw materials for other industries, such as leather and other livestock products (Said, 2021). However, despite having great potential, the cattle farming industry is also faced with various complex challenges, especially those related to business risks (Khatri et al., 2023).

First of all, fluctuations in feed prices are one of the main risks faced by business actors in the cattle industry (Sirohi et al., 2017). Increases in feed prices, which are often triggered by external factors such as climate change, global market instability, and rising energy prices, can significantly reduce profit margins for cattle farmers (Rojas-Downing et al., 2017). In addition, changes in government policies related to feed subsidies and environmental regulations can also affect production and operational costs in this industry (Tsiouni et al., 2021).

Second, livestock health challenges are also an important risk factor in the cattle farming industry (Grout et al., 2020). Infectious diseases can quickly spread among livestock, causing major losses in animal health and cattle productivity (Clemmons et al., 2021). In addition, the threat of zoonotic diseases also increases public health risks and can disrupt operational stability in the animal product supply chain (Godde et al., 2021).

Apart from external factors and livestock health, ineffective financial management can also be a source of risk for business actors in the cattle farming industry (Lovarelli et al., 2020). A lack of understanding of financial risk management, including liquidity

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management, debt management, and capital investment, can result in financial instability and difficulty in meeting financial obligations (Arif & Nauman Anees, 2012).

Market uncertainty is an additional risk that must be faced by business actors in the cattle industry. Changing consumer trends, fluctuating market demand, and intense competition can make it difficult for business actors to plan effective marketing and product development strategies.

By thoroughly understanding the risks associated with cattle farming, business actors can identify, evaluate and manage these risks effectively. In this literature review, we will carefully investigate various aspects that influence business risks in the cattle farming industry, as well as mitigation strategies that can be implemented to increase business resilience amidst the challenges faced.

RESEARCH METHODS

A. Material

The data used in this research consists of literature reviews from 17 journals originating from international and national sources. These journals were selected based on their relevance to the research topic of business risk in the cattle farming industry. This literature review covers various aspects of business risk in the cattle industry, including financial risk management, herd health, market uncertainty, risk management practices, environmental regulations, innovative technologies, and supply chain resilience. These journals provide in-depth insight into the challenges and opportunities faced by business people in the cattle farming industry in various countries, as well as strategies that can be implemented to reduce risks and improve business performance.

B. Method

The method used in this research is qualitative with a literature review approach. This approach allows researchers to investigate various perspectives and findings contained in the literature regarding business risks in the cattle farming industry. By using a qualitative approach, researchers can conduct in-depth analysis of existing data, identify patterns, trends and important findings, and present a comprehensive understanding of the research topic. Thus, through a qualitative literature review approach, this research aims to compile a synthesis of information from various relevant literature sources and present an in-depth understanding of business risks in the cattle farming industry.

RESULTS AND DISCUSSION

A. Results

The cattle industry is an important part of the agricultural sector which meets the demand for beef for both domestic and international markets. However, like other industries, the cattle industry also has business risks that need to be considered in its management. Several studies have revealed various aspects of risk in supply chains and business management in this sector. One study conducted by Saptana (2017) highlighted the importance of supply chain management in the cattle industry, especially related to the availability and distribution of beef. The analysis shows that long supply channels and control by inter-regional intermediaries and traders can affect overall supply chain performance. Apart from that, financial risk is also a main focus, where the scale of the cattle farming business can affect the profitability of the business.

In the midst of the COVID-19 pandemic, risks in the cattle industry are increasingly complex. Study by Firmansyah et al., (2023) discusses a risk management-based cattle import policy strategy as an effort to reduce potential losses due to fluctuations in supply and demand during the pandemic. The results of the risk analysis are used to formulate

policy strategies that can increase the company's readiness in facing crisis situations. Apart from that, developing livestock group businesses is also an important strategy in managing business risks in the cattle industry. Research by Ilham and Suprehatin (2020) shows that developing business strategies based on internal and external factors can help livestock groups overcome the challenges they face. Factors such as the availability of animal feed and government policies are the main considerations in formulating an effective business strategy.

In this context, a deep understanding of business risks in the cattle industry is key to developing effective management strategies. Through comprehensive analysis of risk factors and implementation of appropriate strategies, business actors can increase their business resilience and ensure operational continuity in the face of market dynamics and an uncertain environment. The cattle industry involves various risks that need to be understood and handled by business actors. Several studies have revealed important aspects related to risk in this industry. Study by Berlian Syahrial Firdaus et al., (2020) revealed that production risks in dairy farming in Getasan District, Semarang, tend to be high and experience extreme fluctuations. This analysis highlights the importance of risk mitigation in order to increase productivity and develop dairy cattle businesses.

On the other hand, Nur Rahmah Razak et al., (2021) discusses business analysis and development strategies for beef cattle farming in Patalassang Village, East Sinjai District, Sinjai Regency. This study shows that beef cattle farming is economically feasible to develop, but appropriate strategies are needed to increase livestock production and quality. Furthermore, Rosita Noviana et al., (2021) explored the risk preferences of dairy farmers in Cisarua District, Bogor Regency. The research results show that production factors influence production risk in dairy farming, with farmers tending to be risk takers in the use of all production inputs.

Apart from that, resource accessibility is also an important factor in managing beef cattle farming businesses, as discussed by Amam et al., (2021). The study highlights the importance of the quality of livestock farmers' human resources (HR) in influencing access to financial, technological and physical resources. Mohammad Miftahur Rofiqi et al., (2023) identified risk factors causing cases of repeat breeding reproductive disorders in beef cattle in Klabang District, Bondowoso Regency. This study shows that various factors such as the length of the mating period, the breeder's ability to detect heat cycles, and the breeder's knowledge about livestock reproduction are correlated with the incidence of repeat breeding reproductive disorders.

Cattle farming stands out as a resilient agricultural commodity, consistently showing strong performance across a wide range of economic situations. This resilience is evident in returns, risk management, and contribution to portfolio optimization (Powell et al., 2019). Despite facing challenges such as climate change and market fluctuations, cattle commodities have consistently provided good results. One of the significant risks associated with cattle farming is potential exposure to pesticides such as chlorpyrifos (CPF) and simpermethrin (CYP) through food intake. These pesticides, which are commonly used in fruit, vegetable and beef cattle production, pose health risks to consumers. Efforts to reduce these risks require comprehensive monitoring and regulatory measures to ensure food safety and minimize human exposure to hazardous chemicals (Ferre et al., 2018).

In regions such as Tunisia, dairy farmers face climate change-related risks that threaten livestock performance and animal feed production (Amamou et al., 2018). Farmers adopted adaptation strategies focused on increasing water capacity for livestock, improving housing conditions, and improving overall farm management practices (Astaman et al., 2021). Understanding farmers' perceptions and implementing

appropriate policies is critical for sustainable adaptation to climate change in dairy farming systems (Powell et al., 2019). Traditional beef cattle farming, especially in regions such as Bali, presents various business risks, including production risk, market risk, human resource risk, technological risk and environmental risk (Nuraini et al., 2020). An effective risk management strategy is essential to minimize these risks and prevent business failure. Although risks cannot be completely avoided, appropriate measures can reduce their adverse effects on cattle farming businesses (Brščić et al., 2018).

Additionally, on intensive feed farms in Austria, Germany and Italy, factors such as biosecurity measures, management practices and production records significantly influence livestock mortality rates. Implementing measures such as maintaining biosecurity protocols, proper handling of animals during transportation, and recording production in detail can reduce livestock deaths and increase overall livestock productivity (Rusman et al., 2020). In conclusion, cattle farming remains an important agricultural sector with its unique challenges and opportunities. Effective risk management, adaptation to climate change, and compliance with food safety standards are essential to ensure the sustainability and resilience of the cattle industry. This comprehensive discussion highlights the multi-dimensional nature of cattle farming, covering economic, environmental, and health aspects, and emphasizes the importance of a holistic approach to addressing the challenges faced by cattle farmers around the world.

B. Discussion

The cattle industry is a vital sector in the global economy, providing an important source of animal protein for society. However, like other industries, this industry also faces various business risks that need to be understood and managed carefully. In looking at these risks, it is important to pay attention to factors such as fluctuations in feed prices, animal diseases, climate change, as well as external factors such as pandemics that can affect the balance of supply and demand.

The importance of supply chain management in the cattle industry is a major highlight in understanding the related business risks. From upstream to downstream, each stage in the supply chain has potential risks that can affect the availability and distribution of beef. Therefore, a holistic risk management strategy needs to be implemented to ensure smooth operations from the farm to the end consumer.

Apart from that, internal factors in livestock operations such as business scale, financial management, and internal policies also play a key role in dealing with business risks. Small businesses may have different challenges in managing financial risk compared to large businesses. Therefore, it is important for stakeholders in the cattle industry to consider strategies that are appropriate to the scale and characteristics of each business.

The COVID-19 pandemic has exposed additional complexities in risk management in the cattle industry. Global market fluctuations, mobility restrictions and economic uncertainty increasingly highlight the importance of preparedness and flexibility in dealing with unexpected crisis situations. In facing this challenge, collaboration between government, producers and other stakeholders is crucial in formulating and implementing effective strategies.

Finally, in building business resilience in the cattle industry, it is important to pay attention to aspects of sustainability and food safety. Reducing risks to the environment, implementing socially responsible livestock practices, and ensuring food safety for consumers must be a top priority in any risk management strategy adopted by livestock industry stakeholders.

CONCLUSION

Overall, the cattle industry is an important part of the agricultural sector that plays a vital role in meeting global animal protein needs. However, like other industries, this industry also has significant business risks. It is important for stakeholders in this industry to understand and manage these risks effectively. Good supply chain management, holistic risk management strategies, adaptation to changing external conditions such as pandemics, and a focus on sustainability and food safety are some important steps in building business resilience in the cattle industry. With the right approach, the cattle industry can remain sustainable and make a valuable contribution to the economy and overall welfare of society.

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