AgBioForum, 25(1): 154-163. ©2023 **AgBioForum**

Business Analysis of Kereman Cow Meet Quality Following the COVID-19 Pandemic: Moderating Role of Farm Environment

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The COVID-19 pandemic has had a significant impact on the quality of meat. To improve this quality, it is imperative to prioritise research and policy initiatives that focus on farm management, environmental factors, feed efficiency, and feed quality. This study aims to examine the influence of farm management practices, feed efficiency, and feed quality on the meat quality of Kereman cows in Indonesia following the COVID-19 pandemic. This study examines the potential moderating influence of the farm environment on various factors, including farm management, feed efficiency, feed quality, and meat quality of Kereman cows in Indonesia following the COVID-19 pandemic. The primary data for this study was obtained from cow farmers in Indonesia using survey questionnaires. The article also assesses the reliability of the data and the relationship between the constructs under study using smart-PLS. The results of the study demonstrate a positive correlation between farm management, feed efficiency, and feed quality and the meat quality of Kereman cows in Indonesia. The results also revealed that the farm environment plays a significant moderating role in the relationship between farm management, feed quality, and meat quality of Kereman cows in Indonesia. The study provides guidance to regulatory bodies in formulating regulations pertaining to the enhancement of meat quality through the implementation of farm management practices, optimisation of feed efficiency, and improvement of feed quality.

Keywords: Farm management, farm environment, feed efficiency, feed quality, meat quality, Kereman cow

INTRODUCTION

The consumption of farm-raised meat is experiencing a surge in global popularity due to an increasing demand for nutritious meat products. To attain optimal quality that meets consumer standards, it is imperative to comprehend the factors that influence the quality of meat produced on farms. The quality of meat is of utmost importance as it significantly influences customer acceptability and long-term interest in the product. The classification of meat quality is commonly divided into two categories: eating quality and processing quality, which are determined based on their respective applications (Sañudo et al., 2004). Nevertheless, the assessment of meat quality by customers holds significant importance. Consumers frequently anticipate that meat will possess qualities such as healthiness, wholesomeness, freshness, leanness, tenderness, juiciness, and flavour. The increasing consumer consciousness regarding personal health has led to a rise in demand for alternative meat products that are considered healthier. This trend is particularly evident in the preference for low-fat options among a significant portion of the population (Carrasco-García et al., 2020).

Farm meat could potentially serve as a viable alternative to red meat due to its comparatively healthier fatty acid composition in relation to beef and lamb. The acceptance of goat meat by consumers is negatively affected by a range of quality-related issues. For example, it is commonly perceived by consumers that beef sourced from farms possesses a coarse texture, fibrous consistency, and a pronounced taste (Pogorzelski et al., 2022). The phenomenon of globalisation, coupled with the ongoing COVID-19 pandemic, has exerted a significant influence on various aspects of the global landscape. One of the primary positive outcomes was to raise global awareness regarding quality of life. The global pandemic has compelled individuals worldwide to adopt a lifestyle that prioritises health and is linked to overall well-being and success. In contemporary society, there is a significant emphasis on the adoption and maintenance of a healthy lifestyle. Healthy food is the fundamental component of a well-rounded and sustainable lifestyle. Globalisation has led to the displacement of the notion of healthy food with that of hygienic food.

There are a multitude of sources for organic food, with meat being widely acknowledged as a prominent category. Furthermore, this phenomenon has led to an increased global demand for high-quality meat. Furthermore, this has led to a significant expansion in the meat industry. It is projected that the meat market will generate a revenue of US$1,378.0 billion in 2023, following the aftermath of the COVID-19 pandemic (Tikhomirova, 2023). The market is projected to experience an annual growth rate of 6.35%. In the context of global comparison, it is projected that China will generate the highest revenue, amounting to $260 billion by the year 2023. A study conducted in 2023 following the COVID-19 pandemic revealed that per-person revenues amounted to US$179.40 (Razanova, Farionik, & Skoromna, 2023). It is projected that the meat market will achieve a volume of 182.1 billion kilogrammes by the year 2028. According to projections, the meat industry is anticipated to experience volumetric growth of 3.3% by the year 2024. It is projected that in 2023, following the aftermath of the COVID-19 pandemic, the

global meat market is expected to yield an average of 20.4 kilogrammes of meat per capita (Ufer, Padilla, & Link, 2023). Indonesia, specifically the region of Bali, has been confronted with a dearth of natural resources, specifically in the realm of mining activities. Bali cattle possess remarkable adaptability, rendering them suitable for utilisation in diverse ecological settings. The Bali cattle breed is currently thriving in various regions, including Java, Sulawesi, Nusa Tenggara, and the island of Bali (Nuraini, Aditia, & Brahmantiyo, 2018). Bali cattle are characterised by their distinctive white buttocks and all four of their legs, which exhibit a striking white coloration. Bali cattle, a breed indigenous to Indonesia, generally exhibit a weight range of 300 to 400 kg. Notably, they possess one of the highest carcass proportions among native Indonesian cattle, measuring at 57%. During the early stages of their development, Bali cattle exhibit a physique resembling that of a bull and possess a brick-red hue. As Bali cattle mature, their coloration undergoes a progressive darkening, particularly in males. On average, Bali cattle exhibit a height of approximately 130 cm, whereby the male counterparts possess horns that extend further from the skull compared to the female counterparts (Sofyan et al., 2021).

The population of Bali cattle exhibits variation in terms of gender, encompassing both males and females. Between the years 2016 and 2020, the population of male Bali cattle in Bali Province is projected to be 218,027 heads, 194,511 heads, 205,929 heads, 208,635 heads, and 204,895 heads, respectively. The population of female Bali cattle in 2020 was recorded as 328,343, 313,283, 320,230, 336,320, and potentially as high as 345,455 individuals (Listyarini et al., 2022). Various factors influence the quality of meat, both in Indonesia (specifically Bali) and worldwide. 1) farm management, which encompasses elements such as temperature and humidity, 2) various species, 3) Heredity is a fundamental aspect of genetics and biology. It refers to the passing down of genetic information from one 4) Age, and 5) Gender 6) feed efficiency, 7) feed efficiency, 8) muscle location activity, 9) nutritional factors, 10) pre-slaughter fasting, 11) chilling, and ageing have been discussed in previous studies (Mahbubi, Uchiyama, & Hatanaka, 2019; Nuraini, Aditia, & Brahmantiyo, 2018; Sofyan et al., 2021). The primary objective of the current study was to investigate the various factors, such as farm management, feed quality, and efficiency, in relation to meat quality. Additionally, the study examines the moderating effect of the farm environment.

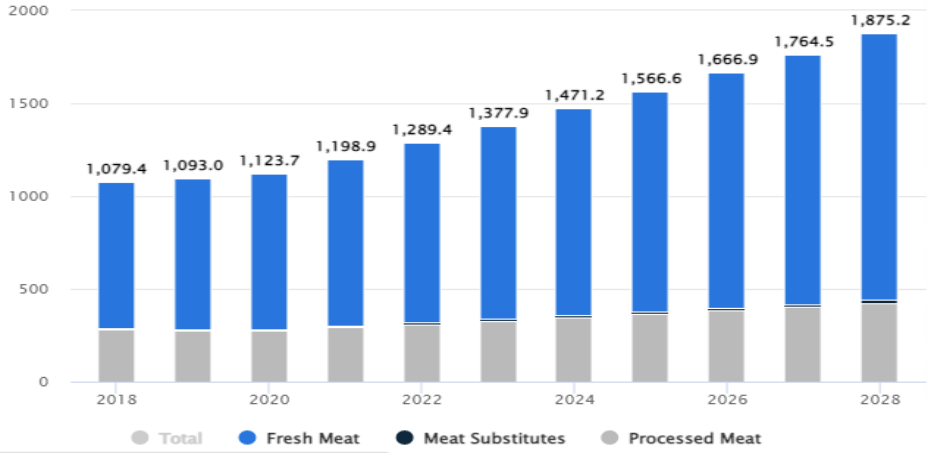

Figure 1: Revenue from Meat
Source: Statista

This study is intended to fill certain gaps in the existing literature. Specifically, the investigation of a model consisting of variables such as meat quality, farm management, feed quality, and feed efficiency, along with the moderating influence of the farm environment, has not been thoroughly explored in recent studies, particularly in the context of Bali, Indonesia. In addition, 1) Alcalde et al. (2017) and Kučević et al. (2019) have looked into the connection between farm management and meat quality. This study aims to explore the same relationship while also considering factors such as meat quality, feed quality, and feed efficiency. Additionally, the moderating effect of the farm environment will be examined in the context of Bali, Indonesia. 2) In their respective studies, Andersen, Oksbjerg, Young, and Therkildsen (2005) and de Araújo et al. (2017) investigated the interconnection between feed quality and meat quality. Building upon their research, this study further examines this relationship in the context of Bali, Indonesia, by incorporating additional factors such as farm management, feed efficiency, and the moderating effect of the farm environment. 3) Nascimento et al. (2016) and Gurgeira et al. (2022) investigated the interplay between feed efficiency and meat quality.

Furthermore, they examined the influence of additional factors such as farm management, feed quality, and the moderating effect of the farm environment in Bali, Indonesia. 4) Tandon et al. (2020) and Kushwah, Dhir, and Sagar (2019) investigated the moderating effect of the farm environment in various contexts. Specifically, they examined its role as a moderating variable in the relationship between meat quality, farm management, feed quality, and feed efficiency, with a particular focus on Bali, Indonesia. The present study aims to elucidate several key aspects. Firstly, it seeks to underscore the significance of

meat quality in promoting good health and nourishment for children. Secondly, it aims to contribute to the existing literature on meat quality, with a specific focus on Bali, Indonesia. Thirdly, it aims to provide valuable insights for professionals in the meat industry, enabling them to comprehend the demand for organic food and develop strategies to enhance meat quality. Lastly, it aims to assist professionals involved in farm management by elucidating the fundamental requirements for producing high-quality animals for organic food production.

LITERATURE REVIEW

The consumption of meat is experiencing a significant surge on a global scale. The rise in utilisation of meat additionally contributes to the amplification of the significance of meat quality. There is an increasing global awareness regarding the importance of high-quality nutrition. In this particular study, Alcalde et al. (2017) conducted an investigation to examine the relationship between farm management practices and transportation duration on the quality of the milk of kids suckling goats. The study was conducted on suckling goat offspring. In the initial stage, a total of 32 suckling kids were selected from each farm to be included in the experiment. The juvenile goats were relocated to a distance ranging from 2 to 6 hours. Subsequently, the blood samples of the juvenile goats were collected, and the findings indicated that the musculature of the travelling kids' meat was impacted. The study's findings indicate that the management of transportation in farming has a significant impact on the quality of meat. In a similar vein, the study conducted by Kučević et al. (2019) examined the relationship between farm management outcomes and their impact on the quality traits of livestock during the fattening phase. The study primarily concentrated on the Simmental calves. The population, consisting of 48 Simmental individuals, was partitioned into two distinct sections.

In the initial section, claves sourced from a comparable farm were included, while in the subsequent section, claves obtained from diverse farms were chosen. A total of 24 claves were chosen from a single farm, while an additional 24 claves were selected from various farms. Both calves were closely monitored and provided with nourishment to determine if it led to similar fat content and meat quality. The findings of the study indicate that the way farm management practices, particularly those related to feeding, impact the fat content of animals, subsequently influencing the overall quality of their meat, The significance of goat meat is increasingly recognised with the passage of time. Over time, there has been a growing recognition that goat meat possesses a high nutritional value and lean composition, thereby exerting a significant and favourable impact on human health. It is imperative to comprehend the underlying factors that contribute to the quality of meat. In the present study, Pophiwa, Webb, and Frylinck (2020) conducted research on the various factors that have an impact on the quality of meat. The study was conducted in the United States of America. The findings of the investigation suggest that various factors, including farm management practices, breed characteristics, genetic traits, age at slaughter, and proximity to the abattoir, exert a significant influence on the quality of meat. The decided hypothesis is as under:

H1: The farm management has an association with meat quality.

The utilisation of the management component in the feeding strategy is commonly employed as a means of ensuring quality control in meat production, as well as in relation to performance, animal welfare, safety, nutritional value, and sensory and technological quality. The foundation of high-quality meat lies in the provision of high-quality feed. Moreover, it also leads to the safeguarding of animals against various diseases. In the present study, Andersen, Oksbjerg, Young, and Therkildsen (2005) investigated whether the quality of feed has an impact on the quality of meat. The study findings suggest that a) muscle protein turnover has an impact on the quality of meat, and b) the energy level of muscles at the time of slaughter also influences meat quality. The study strongly advocates prioritising the feed quality of animals to improve the quality of meat. Several factors, such as farm management practices, farm environment, feed efficiency, distance to the abattoir, and animal age, can influence the quality of feed. In the present study, de Araújo et al. (2017) conducted research on the interrelationship between quantitative feed, sex-related traits, and meat quality. The study was conducted on juvenile sheep. The study employed a sample of 35 lambs, each with an age of 120 days and a weight of 0.89 kilogrammes. The research findings suggest that feed quality factors have a significant impact on the age, weight, and fat content of lambs, consequently influencing the overall meat quality. The study suggested that particular attention should be given to the quality of the lamb's feed to ensure the provision of high-quality nutrition. In a similar vein, the concept of feed intake (FI), which quantifies the efficiency with which animals utilise feed, can be employed to elucidate the significant variability in feed consumption observed among beef cattle, irrespective of their size and rate of growth. Food insecurity (FI) is defined as the difference between the actual intake of dry matter or energy and the expected intake. The quality of meat is influenced by the feed intake of animals. Fidelis et al. (2017) conducted research on the interrelationship between feed intake, carcass traits, and meat quality. The study was conducted on male bovines. The findings of the study suggest a significant correlation between the quality of meat and the bulls' feed intake. The decided hypothesis is as under:

H2: The meat quality has an association with meat quality.

The cost of feed consumption represents the highest expenditure in grill production. Enhancing the efficiency of feed consumption constitutes a fundamental objective within breeding methodologies. Scholarly literature has suggested a correlation between food efficiency and the quality of meat. In this context, Wen et al. (2018) conducted research on the interrelationship between measures of feed efficiency, production, and meat quality. The study was conducted in China. The findings of the study suggest that food efficiency has a significant impact

on food quality, particularly within the context of China. Moreover, considering customer preferences and overall economic benefits, food intake proves to be a more effective measure for improving feed efficiency in broilers with slower development. The study additionally suggested placing particular emphasis on feed efficiency to improve the quality of meat. There are a multitude of factors that are prevalent in the practice of cattle farming. Two crucial factors to consider are the quality of the feed and the cost of food. Cattle farmers employ diligent measures to enhance food efficiency to reduce food costs and improve food quality. Maximising feed efficiency is of utmost importance to reduce feed and feeding expenses, consequently leading to enhanced profitability. This is since feed costs typically constitute a significant portion, ranging from 55% to 75% of the overall expenses associated with beef production, excluding the costs associated with acquiring the animals. Nascimento et al. (2016) conducted an investigation into the relationship between feed efficiency and meat quality. The study was conducted in Brazil. Brazil is widely recognised as the global leader in terms of cattle population. The findings of the study suggest that improved feed efficiency leads to reduced food expenses and contributes to enhanced meat quality. Furthermore, the study conducted by Gurgeira et al. (2022) examined the interrelationship between feed efficiency, growth characteristics, and meat quality. The study employed a sample size of 40 animals for the investigation. The findings of the study indicated that among the 40 animals selected, 30 were categorised as efficient, 13 demonstrated a moderate level of efficiency, and the remaining 10 were deemed inefficient. The decided hypothesis is as under:

H3: Meat efficiency has an association with meat quality.

Farm management is a challenging occupation. There are multiple factors contributing to this phenomenon, including the management of animal species, the quality of feed, the efficiency of feed utilisation, and living conditions. The fauna inhabiting agricultural landscapes is subject to the influence of various factors. The management of agricultural enterprises involves the establishment of equilibrium among various factors. In numerous instances, these factors are effectively addressed, even though the desired outcome of improving animal health may not be achieved. The farm environment has been identified as the primary determinant in all aspects. Despite the implementation of effective farm management practices, the anticipated outcomes are unlikely to be realised because of the prevailing agricultural conditions. Hence, the management practices employed on a farm have a significant impact on both farm management itself and the quality of meat produced, particularly with regards to animal health. In the present study, Tandon et al. (2020) examined the relationship between individuals' attitudes and their purchasing behaviour in the organic food market. Moreover, the relationship was examined by incorporating the moderating factors of trust and environmental concern. The study examined the relationship within the population of India. The study employs a cross-sectional research design. The study employed a quantitative approach. The researchers employed a random sampling technique. A sample of 512 participants was selected to gather quantitative data. Data collection was conducted using questionnaires. To investigate the relationship, the research utilised the SPAA-AMOS analysis approach. The findings derived from the analysis indicate a correlation between attitudes, motives, and the purchasing behaviour of organic food in India. Moreover, the relationship mentioned above is moderated by trust and environmental concern. The decided hypothesis is as under:

H4: Farm environment moderates the farm management nexus with meat quality.

The demand for organic food, specifically meat, is experiencing a steady increase over time. The global community prioritises quality over quantity. The implementation of this strategy has resulted in a significant enhancement of the farm business. On the contrary, cattle farming is widely regarded as a highly challenging occupation, primarily attributed to various factors such as the complexities associated with feeding practices and effective management strategies. The provision of nutritious feed to farm animals is associated with favourable health outcomes, which in turn serves as an indicator of the quality of meat produced. In numerous instances, the provision of high-quality feed does not necessarily result in an improvement in the quality of meat. There are numerous factors contributing to this phenomenon, such as the agricultural setting. Hence, the agricultural setting influences this association. In the present study, Kushwah, Dhir, and Sagar (2019) examined the relationship between attention to consumption and choice behaviour in the context of organic food. Moreover, the relationship was examined by incorporating the moderating influence of purchasing behaviour and environmental concern. The investigation examined the relationship within the population of China. The study employs a cross-sectional research design. The study employed a quantitative approach. The researchers employed a random sampling technique. A sample of 452 participants was used to collect quantitative data. Data collection was conducted using questionnaires. To investigate the relationship, the study utilised the structural equation modelling (SEM) analysis approach. The findings derived from the analysis suggest a significant correlation between attention to consumption and the behaviour of choosing organic food. Moreover, the relationship mentioned above is moderated by factors such as purchasing behaviour and environmental concerns. The decided hypothesis is as under:

H5: The farm environment moderates the feed quality nexus with meat quality.

There is a global trend towards improved hygiene practices. The demand for organic food, specifically meat, is experiencing a rapid increase. The primary objective of the global community is presently focused on achieving optimal quality. The enterprise of cattle farming is characterised by both profitability and challenges. The presence of robust and well-maintained farm animals serves as an indicator of the superior quality of meat.

Following the assessment of feed quality, the next crucial factor to consider is feed efficiency. In numerous instances, the food efficiency of animals is deemed satisfactory; however, it does not necessarily translate into a corresponding impact on their meat quality and overall health. There exist multiple factors contributing to this phenomenon, such as the farm's environmental conditions and the specific animal species involved. Hence, the agricultural setting has an impact on the correlation between food efficiency and quality. In the present study, Cachero-Martínez (2020) examined the relationship between attitude, satisfaction, purchase intentions, and organic food products. Moreover, the relationship was examined by incorporating the moderating influence of environmental concern. The investigation examined the relationship within the population of Spain. The study employs a cross-sectional research design. The study employed a quantitative approach. The researchers employed a probabilistic sampling technique. A sample consisting of 195 consumers was used to collect quantitative data. Data collection was conducted using questionnaires. To investigate the relationship mentioned above, the analysis approach of LR was utilised. The findings derived from the analysis indicate a significant relationship between attitude, satisfaction, and purchase intentions in relation to organic food products. Moreover, the relationship mentioned above is moderated by environmental concerns. The decided hypothesis is as under:

H6: The farm environment moderates the feed efficiency nexus with meat quality.

RESEARCH METHODS

This study aims to examine the influence of farm management, feed efficiency, and feed quality on meat quality in Kereman cows in Indonesia following the Covid-19 pandemic. Additionally, it seeks to explore the moderating role of the farm environment in the relationship between farm management, feed efficiency, feed quality, and meat quality. The primary data for this study is obtained from cow farmers in Indonesia through the utilisation of survey questionnaires. The study employs various variables as proxies, including farm management, feed efficiency, feed quality, farm environment, and meat quality. These variables are measured using specific items, as indicated in the respective studies: six items for farm management (Rose et al., 2019), five questions for feed efficiency (Li et al., 2019), three items for feed quality (Kong et al., 2020), four items for farm environment (Mazhar et al., 2021), and five items for meat quality (Gómez, Janardhanan, Ibañez, & Beriain, 2020).

The participants of this study were chosen from a population of cow farmers in Indonesia. The method employed for selecting the farmers as respondents was simple random sampling. The surveys were distributed to the selected farmers through personal visits. The researchers distributed a total of 543 surveys, of which 294 were received and subsequently utilised for analysis. The response rate of these surveys is approximately 54.14 percent. Furthermore, the article assesses the reliability of the data and examines the associations among the constructs under investigation using smart-PLS. The primary data analysis tool discussed in the literature effectively handles complex models and large data sets, yielding accurate estimations (Hair Jr, Howard, & Nitzl, 2020). Additionally, the article employed three predictors, namely farm management (FM), feed efficiency (FE), and feed quality (FQ). Furthermore, the research also incorporated a moderating construct known as farm environment (FEN) and a dependent construct referred to as meat quality (MQ). The constructs are referenced in Figure 2.

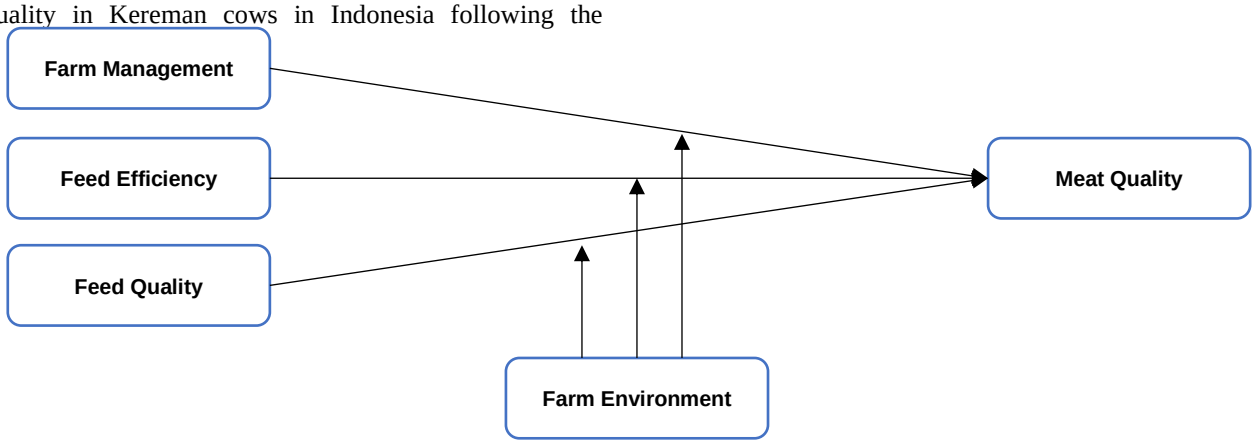

Figure 2: Theoretical framework

RESEARCH FINDINGS

The study findings revealed a significant correlation between the items, which is commonly referred to as convergent validity. The verification process involves the utilisation of Alpha, which yields results indicating values exceeding 0.70. Furthermore, the examination is conducted utilising factor loadings, and the outcomes reveal values surpassing 0.50. Furthermore, the assessment of composite reliability (CR) was conducted to validate the findings, revealing values exceeding 0.70. Finally, the assessment is also conducted using the average variance extracted (AVE) method, which reveals values exceeding 0.50. The observed values demonstrated a strong positive correlation among the items. The numerical values are presented in Table 1.

Table 1. Convergent validity

Constructs	Items	Loadings	Alpha	CR	AVE
Feed Efficiency	FE1	0.926	0.928	0.949	0.824
	FE2	0.946			
	FE3	0.936			
	FE5	0.818			
Farm Environment	FEN1	0.926	0.904	0.933	0.777
	FEN2	0.924			
	FEN3	0.795			
	FEN4	0.875			
Farm Management	FM1	0.920	0.960	0.969	0.863
	FM2	0.923			
	FM3	0.931			
	FM5	0.930			
	FM6	0.943			
Feed Quality	FQ1	0.959	0.775	0.877	0.714
	FQ2	0.561			
	FQ3	0.953			
Meat Quality	MQ1	0.637	0.798	0.860	0.613
	MQ3	0.657			
	MQ4	0.902			
	MQ5	0.894			

The outcomes of the study also revealed a significant correlation between the variables, which is commonly referred to as discriminant validity. The Heterotrait Monotrait (HTMT) ratio is utilised for verification purposes, and the obtained results indicate values below 0.90. The observed values suggest a weak correlation among the variables. The data is presented in Table 2.

The results of the path analysis revealed a significant positive relationship between farm management, feed efficiency, and feed quality with the meat quality of Kereman cows in Indonesia. These findings provide support for hypotheses H1, H2, and H3. Furthermore, the results also revealed that the farm environment plays a significant moderating role in the relationship between farm management, feed quality, and meat quality of Kereman cows in Indonesia. These findings support the acceptance of hypotheses H4 and H6. The associations are presented in Table 3.

Table 2: Heterotrait Monotrait ratio

	FE	FEN	FM	FQ	MQ
FE					
FEN	0.525				
FM	0.596	0.502			
FQ	0.776	0.785	0.640		
MQ	0.900	0.547	0.645	0.819	

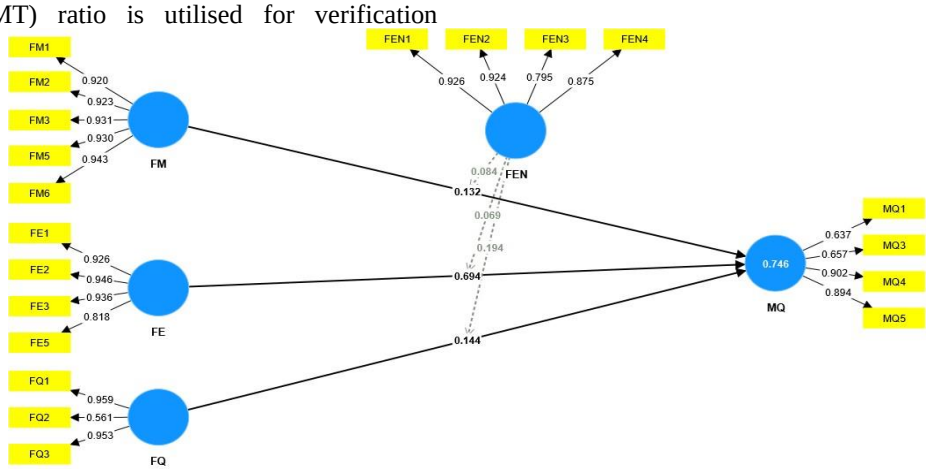

Figure 3: Measurement model assessment

Table 3: Path analysis

Relationships	Beta	Standard deviation	T statistics	P values
FE -> MQ	0.694	0.040	17.330	0.000
FM -> MQ	0.132	0.032	4.083	0.000
FQ -> MQ	0.144	0.049	2.935	0.003
FEN x FE -> MQ	0.069	0.046	1.497	0.135
FEN x FM -> MQ	0.084	0.036	2.301	0.022
FEN x FQ -> MQ	0.194	0.050	3.854	0.000

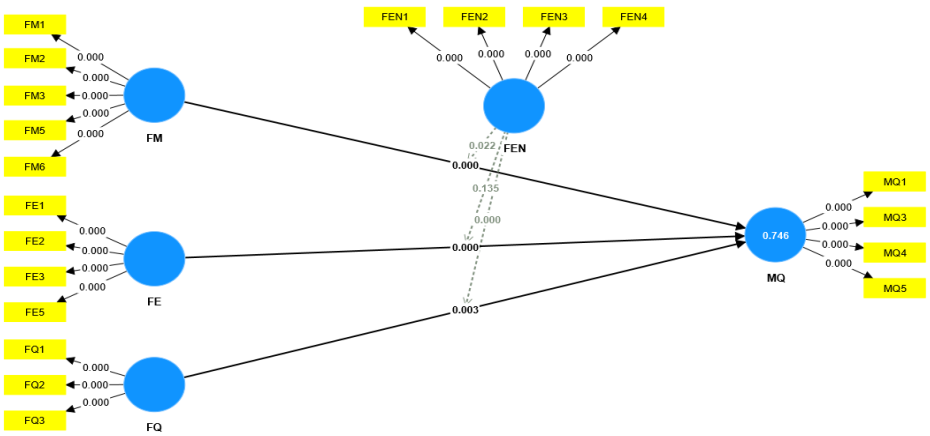

Figure 4: Structural model assessment

DISCUSSIONS

The results of the study suggest that there is a positive correlation between farm management practices and the quality of meat. The findings presented in Biswas et al. (2019) provide support for the notion that individuals engaged in farm management can enhance the quality of meat produced on their farms by effectively executing poultry farming processes and demonstrating efficient organisational skills. Additionally, individuals can develop and implement procedures aimed at enhancing the overall quality of meat products. These findings are consistent with the research conducted by Puvača, Tufarelli, and Giannenas (2022), which similarly demonstrates that the implementation of efficient farm management practices and the maintenance of proper sanitary conditions contribute to the production of higher-quality meat. The findings of the study indicate a positive correlation between feed efficiency and meat quality. These results are consistent with the research conducted by Atela, Mlambo, and Mnisi (2019), which posits that individuals with extensive experience and proficiency in decision-making related to chicken feeding are more capable of effectively managing feed. Due to enhanced feed efficiency, there is potential for the improvement of meat quality to meet the health requirements of consumers. The outcomes presented in this study are consistent with the research conducted by Alagawany, Elnesr, and Farag (2019), who similarly assert that an increase in feed efficiency leads to the development of robust poultry and the production of superior meat.

The findings indicate a positive correlation between the quality of feed and the quality of meat. The findings presented in this study are corroborated by the research conducted by Nguyen Van et al. (2020), which investigates the influence of feed quality on the quality of meat produced on farms. The study suggests that by carefully selecting high-quality feed, it is possible to raise chickens without encountering health problems, ultimately resulting in the production of meat of superior quality. The findings presented in this study are consistent with the findings reported by Ding et al. (2021). The study suggests that by assessing the quality of feed in agricultural settings, there is potential to enhance the production of meat with improved quality. The findings suggest that the farm environment plays a crucial role in moderating the relationship between farm management practices and the quality of meat produced. The findings presented in Saleh et al. (2020) provide support for the notion that an effective farm environment, encompassing the farming structure, organisational culture, and communication structure, can lead to enhanced farm management efficiency and improved meat quality. These findings are consistent with the study conducted by Martins et al. (2021), which similarly asserts that a well-structured farm environment is beneficial for enhancing farm management. The quality of meat is enhanced by effective farm management, which is facilitated by a favourable farm environment.

The findings of the study suggest that the farm environment plays a significant role in influencing both feed efficiency and meat quality. Baéza, Guillier, and Petracci (2022) support the findings of this study by arguing that a clean, conducive environment is essential for enhancing feed efficiency and preserving meat quality. The farm environment enhances the correlation between feed efficiency and meat quality. The findings presented in this study are consistent with the findings of Zampiga et al. (2020), who assert that the presence of a sustainable farm environment positively influences the relationship between feed efficiency and meat quality. The findings of the study suggest that the farm environment plays a crucial role in moderating the relationship between feed quality and meat quality. The results discussed here are similar to those from a study by Grzybowska-Brzezińska, Banach, and Grzywińska-Rąpca (2023), which talks about how important it is to have an efficient farming environment to make sure the quality of animal feed and, in turn, the quality of meat. The research by Baldi, Soglia, and Petracci (2020), which claims that the presence of a sustainable farm environment enhances the association between feed quality and meat quality, is consistent with the findings presented here.

IMPLICATIONS

Poultry farming has emerged as a prominent business in contemporary times, serving to fulfil dietary requirements and fostering economic development. The present article holds significance due to its provision of guidance aimed at enhancing meat quality, thereby fostering the advancement of poultry farming. To enhance the production of superior-quality meat, it is imperative to optimise the efficacy of farm management study guides. The study additionally asserts that it is imperative to recognise and enhance feed efficiency to achieve superior outcomes in meat production. The article additionally posits that effective farm management necessitates the prioritisation of feed quality to achieve high-quality meat production. It is recommended that sustainability be integrated into the agricultural setting to enhance farm management practices and ultimately yield high-quality meat products. The study also suggests that the farm environment should adhere to health preservation standards. This would result in improved feed efficiency and enhanced meat quality. Furthermore, the research indicates that the agricultural setting should possess qualities that are efficient, innovative, and environmentally sustainable. This would compel management to enhance the quality of feed and subsequently improve the quality of meat. The study provides guidance to regulatory bodies in the formulation of regulations pertaining to the enhancement of meat quality through the implementation of effective farm management practices, optimisation of feed efficiency, and ensuring high standards of feed quality.

CONCLUSION

The objective of this study was to investigate the impacts of farm management practices, feed efficiency, and feed quality on the quality of meat. One of the research objectives was additionally to examine the influence of the farm environment on the interplay among farm management, feed efficiency, feed quality, and meat quality. Data from Indonesia was collected using a survey

methodology that involved the use of structured questionnaires. Upon subjecting the data to various analytical techniques, it was observed that there exists a positive correlation between farm management, feed efficiency, and feed quality with regards to meat quality. The findings of the study suggest that the implementation of efficient farm management practices has the potential to mitigate pollution in the resources and processes associated with poultry farming. Therefore, it is possible to enhance the production of meat with improved quality. The findings indicate that the implementation of efficient management practices in feed production can lead to improved health outcomes in chickens, potentially resulting in the production of high-quality meat. The study additionally determined that the implementation of feed maintenance practices on farms contributes to the effective management of disease outbreaks among chickens. Therefore, the production of high-quality meat can be achieved. The findings of the study also indicate that the farm environment plays a crucial role in moderating the relationship between farm management, feed efficiency, feed quality, and meat quality. The implementation of an efficiently organised and environmentally sustainable farm environment leads to enhanced effectiveness in farm management, improved feed efficiency, and enhanced feed quality. Consequently, these factors collectively contribute to the production of higher-quality meat.

LIMITATIONS

The study exhibits certain limitations and necessitates further enhancements. In the present study framework, a restricted set of factors, namely farm management, feed efficiency, and feed quality, are identified as the primary determinants influencing the quality of meat. In addition to meat quality, firm size, innovation, and human resource efficiency are also influential factors. However, it is widely agreed upon, and there is a consensus among scholars that there is no debate regarding this matter. It is anticipated that future researchers will engage in scholarly discourse regarding the correlation between these factors and the quality of meat. Furthermore, in this study, the authors introduce a sole moderator into the research framework. To provide a more comprehensive understanding of the interplay between farm management, feed efficiency, feed quality, and meat quality, it is imperative for researchers to also account for the potential mediating factors involved.

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