

How Does Entrepreneurial Competence Contribute to Livestock Farmers' Performance?

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ABSTRACT

The research aimed to examine (1) the direct effect of entrepreneurial skill, market orientation, sales orientation, and networking on entrepreneurial competence; (2) the direct effect of entrepreneurial competence on livestock farmers' performance; and (3) the indirect effect of entrepreneurial skill, market orientation, sales orientation, and networking on livestock farmers' performance through entrepreneurial competence. Samples were 399 livestock farmers in Magelang Regency. The independent variables were entrepreneurial skills, market orientation, sales orientation, and networking. Meanwhile, the dependent variable was livestock farmers' performance, and the mediating variable was entrepreneurial competence. Variable measurement used 7-Likert scale questionnaires. Then, data analysis used Structural Equation Modeling (SEM). Based on data analysis, the research finds that entrepreneurial skill, market orientation, sales orientation, and networking improve entrepreneurial competence. In addition, entrepreneurial competence increases livestock farmers' performance. Then, entrepreneurial skill, market orientation, sales orientation, and networking improve livestock farmers' performance through entrepreneurial competence. The research contributes to giving new evidence of entrepreneurial competence in the context of animal husbandry. The research also contributes to capturing how the implementation of the Resources-Based View (RBV) concept affects the achievement of livestock farmers' performance. The research has some implications. First, livestock farmers increase entrepreneurial competence by building entrepreneurial skills, market orientation, sales orientation, and networking to improve performance. Second, regulators can formulate regulations or programs that can help livestock farmers to grow their businesses since the business is run individually, such as human resource development or business establishment programs.

Keywords: entrepreneurial competence, livestock farmers, animal husbandry

INTRODUCTION

The livestock sector is one of the most reliable sectors in Indonesia. Direktorat Jenderal Peternakan dan Kesehatan Hewan Kementerian Pertanian (2022) reported that there was an increase in the contribution of the animal husbandry sector to the Gross Domestic

Product (GDP) from IDR 148,688 billion to IDR 167,629 billion from 2017 to 2021. It shows that the animal husbandry sector is important to be developed. One of the efforts to improve the animal husbandry sector is to increase the productivity, efficiency, and knowledge of husbandry (Siagian, 2011). There are two types of livestock farming: family farming (household-

The research focuses on livestock farmers. In this case, livestock farmers need to increase productivity and efficiency in doing livestock business. First, based on the amount, livestock farmers are much more than commercial husbandry businesses. According to Badan Pusat Statistik (2020), in Indonesia, the number of livestock farmers in Indonesia is 14,800,248 while commercial farms amounts to 629 businesses. Second, one of the characteristics of livestock farmers is that husbandry puts animal husbandry as an alternative source of income while the main income is obtained from crops (Siswati et al., 2019). These conditions make animal husbandry not developed to the maximum. Third, the human resource capacity of the livestock farmers has not reached optimal, including knowledge related to the quality of livestock and animal feed (Hardjanto, 2015). Direktorat Jenderal Peternakan dan Kesehatan Hewan Kementerian Pertanian (2022) reported husbandry performance improvement, including 0.85% to 1.28% improvement in livestock, 0.55% to 0.85% improvement in milk production, and 2.15% to 2.16% improvement of egg production in 2021–2024. It also stated improvements in value added (87% to 95%) and competitive advantage (15% to 30%) in the husbandry industry in 2021–2024.

farmers' performance is entrepreneurial competence. Entrepreneurial competence refers to the specific competencies to perform and run entrepreneurship in certain businesses (García-Cabrera et al., 2023), especially in micro business that still needs growth and progress in the future (Gathoni et al., 2021). In research, entrepreneurial competence is important for livestock farmers to determine husbandry performance (Saleh et al., 2021). The husbandry performance has been investigated previously, including sustainability livestock farming in the European Union (Di Vita et al., 2024) and agriculture in the Netherlands (Rasel et al., 2022).

Source: Output of VOSviewer

A thousand studies between 1974–2024 have been analyzed by bibliometric analysis. The research uses the keywords of “animal husbandry” and “entrepreneurial competence”. Based on Figure 1, there are no studies that examine entrepreneurial competence in the context of animal husbandry. Most studies examine animal husbandry related to horticulture, gender, change management, farmer, and attitude.

It is also important to identify factors that determine entrepreneurial competence to improve livestock farmers’ performance. The research uses entrepreneurial skills, market orientation, sales orientation, and networking. The researchers argue that entrepreneurial skill, market orientation, sales orientation, and networking represent the important issues that occur in entrepreneurial competence. Entrepreneurial skill represents the internal factor of the entrepreneurs. Meanwhile, market and sales orientations represent the interaction with the customers. Then, networking represents interaction with business partners to improve entrepreneurial competence. According to Al Mamun et al. (2019), entrepreneurial skills, market orientation, and networking improve entrepreneurial competence. Similarly, according to Silitonga et al. (2024), sales orientation improves entrepreneurship performance. Based on the Resources-Based View (RBV) concept, entrepreneurial skill, market orientation, sales orientation, networking, and entrepreneurial competence are valuable resources to improve livestock farmers’ performance.

The RBV explains that business output, including competitive advantages and performance, can be achieved by optimizing the available resources (D’Oria et al., 2021; Ristyan et al., 2023). When the business can optimize its available resources, it will have unique advantages, compared to other competitors, to win the market competition and achieve higher performance. The RBV suggests that managers’ competence is important in managing, developing, planning, and using the available resources to get effective output (Al Mamun et al., 2019). Entrepreneurial competence is a crucial advantage in determining business performance since it is the indicator of knowledge, skill, and ability by managers (Fazal, Mamun, et al., 2022). The framework of RBV in the context of the research can be seen in Figure 2.

Based on Figure 2, in the research context, RBV captures that livestock farmers’ performance can be achieved if the farmers have a resource of entrepreneurial competence. Entrepreneurial competence indicates that the farmers have entrepreneurial skills, build networking, and manage sales and market orientations based on customers’ expectations.

Entrepreneurial skill occurs when individuals do or have the knowledge to establish and operate the business successfully (Pham et al., 2023). The knowledge is useful to complete the set of specific entrepreneurship qualities to run the business (Liao et al., 2022). In the research, the skill refers to the ability to learn and implement important entrepreneurship factors effectively and efficiently (Hu et al., 2022).

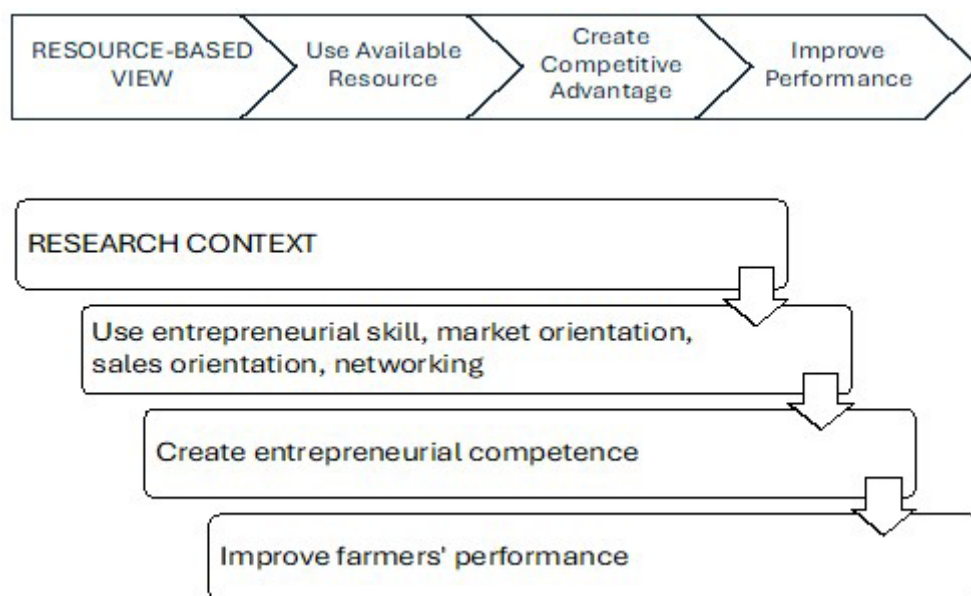


Figure 2 Theory Framework in the Research

Source: Elaboration of RBV Theory, Previous Findings, and Research Context

Based on the RBV, entrepreneurial competence can be a competitive advantage if entrepreneurial competence is built by a resource component of skill that provides knowledge to run the business profitably.

Entrepreneurial skills include specific competence to develop and manage the business and characteristics to run the strategy effectively and make good decisions to improve the business (Hu et al., 2022). Entrepreneurial competence must consist of all sets of skills to run the business (Al Mamun et al., 2019). Entrepreneurial skills are important for providing judgment, consideration, and transformation ability in the entrepreneurs' attitude (Liao et al., 2022). In the research context, livestock farmers need to have a set of skills that can make judgments and considerations about husbandry problems or use creative problem-solving to improve the quality of the livestock performance. According to Al Mamun et al. (2019), entrepreneurial skill affects entrepreneurial competence. Hence, the following is the first proposed hypothesis.

H1: Entrepreneurial skill improves entrepreneurial competence.

Market orientation refers to the business orientation toward the product market including promotion, collection, execution, and learning process to market characteristics so that the business can fulfill customers' expectations (Fakhreddin & Foroudi, 2022; Schulze et al., 2022). It is an indicator of the adaptive learning process where entrepreneurs can observe and react to the uncertainty of the market (Schulze et al., 2022). It is built in business as the culture to improve competence for entrepreneurs and create value for customers (Kaushik & Dangwal, 2023). Based on the RBV, entrepreneurial competence can be built if entrepreneurs have resources such as the culture and wisdom related to the market. Culture and wisdom related to the market bring adaptive skills to respond to the market condition (Zhang et al., 2023). When entrepreneurs have good market orientation, they have the competencies to bring innovation and quality to the customers. In the research context, livestock farmers need to have market orientation so that they have the competencies to create value for customers. According to Al Mamun et al. (2019), market orientation affects entrepreneurial competence. So, the second proposed hypothesis is as follows.

H2: Market orientation improves entrepreneurial competence.

Next, sales orientation refers to the activities to create selling products (Locander et al., 2023). Customers' needs must be prioritized to improve selling products. In the context of the RBV, the creation of products reflects valuable resources for developing entrepreneurial competence. Moreover, customers' needs and complaints can be solved when

entrepreneurs have the competence to generate better sales orientation (Guerola-Navarro et al., 2024). In the research context, livestock farmers need to have sales orientation so that they have the competencies to create product sales and fulfill customers' needs. Sales orientation affects entrepreneurial competence (Silitonga et al., 2024). So, the third proposed hypothesis is as follows.

H3: Sales orientation improves entrepreneurial competence.

Networking refers to the interaction between partners in the business in the different dimensions of working sectors. Entrepreneurs need to maintain networking. Networking maintenance shows that entrepreneurs can manage their networks and interactions to build good, both direct and indirect relationships in the business system (Sendawula et al., 2023). The RBV captures networking as a valuable resource for improving entrepreneurial competence and developing a business. Good networking allows entrepreneurs to have a framework that provides good opportunities for the business (Wasim, Youssef, et al., 2024). In the research, livestock farmers need to maintain networking to maintain their business. It is found that networking affects entrepreneurial competence (Al Mamun et al., 2019). The following is the fourth proposed hypothesis.

H4: Networking improves entrepreneurial competence.

In entrepreneurship, competencies are needed to build, improve, and maintain the business (Ismail, 2022). Based on the RBV, competence is one of the competitive advantages that bring a business better performance. Entrepreneurial competence indicates the ability to ensure that the business wants are fulfilled. In research, livestock farmers with competencies to build, improve, and maintain the business will generate higher profits. According to Al Mamun et al. (2019), entrepreneurial competence affects business performance. Hence, the fifth proposed hypothesis is as follows.

H5: Entrepreneurial competence improves livestock farmers' performance.

Based on the RBV, the final output from using the valuable resources is to get higher performance. However, the use of resources must create a competitive advantage that can improve business performance to achieve higher performance (D'Oria et al., 2021; Ristyawan et al., 2023). In this case, entrepreneurial skills, market orientation, sales orientation, and networking are the resources to create entrepreneurial competence as a competitive advantage. Furthermore, entrepreneurial competence will bring higher performance to the business. Based

on the argument of RBV, the research suggests that entrepreneurial competence plays the mediating role between the resources (entrepreneurial skill, market orientation, sales orientation, and networking) and livestock farmers' performance.

Livestock farmers' performance can be improved if they have entrepreneurial skills that relate to the husbandry industry, business, and management. Entrepreneurial skills are important to create a competitive advantage (Fazal, Mamun, et al., 2022). The set of entrepreneurial skills leads farmers to have entrepreneurial competence that can increase revenue and profit. According to Al Mamun et al. (2019), entrepreneurial competence has a mediation effect between entrepreneurial skill and performance. The sixth proposed hypothesis is as follows.

H6: Entrepreneurial skill improves performance livestock farmers' performance through entrepreneurial competence.

Effective market orientation can bring higher performance to livestock farmers (Wasim, Ahmed, et al., 2024) since effective market orientation promotes the understanding of customers' needs and expectations, distribution channels, and market conditions (Gonu et al., 2023; Rokkan, 2023). Market orientation is manifested in the learning process so that livestock farmers have higher competencies (Wahyono & Hutahayan, 2021). With higher competencies, livestock farmers understand how to manage customers' needs and expectations, distribution channels, and market strategy to achieve better performance. According to Al Mamun et al. (2019), entrepreneurial competence has a mediation effect between market orientation and performance. Hence, the following is the seventh proposed hypothesis.

H7: Market orientation improves performance livestock farmers' performance through entrepreneurial competence.

The real activity of getting revenue for livestock farmers is to sell the products to the customers. In this case, entrepreneurial competence comes from the sales orientation aspects of the customer relationship, product presentation, and regular product sales (Guerola-Navarro et al., 2024). Sales are the main components of profit, so livestock farmers need to have effective sales orientation to achieve better performance. The ability to sell the products indicates that livestock farmers have higher competence to increase performance. Marketing competence has a mediation effect between sales orientation and sales performance (Hendiarto & Musthafa, 2023). The eighth proposed hypothesis is as follows.

H8: Sales orientation improves performance livestock farmers' performance through entrepreneurial competence.

The ability to build and maintain the networking is a response to the dynamic business environment. Networking plays an important role in making effective and efficient business and generating better performance (Sendawula et al., 2023; Tajeddini et al., 2020). Networking allows livestock farmers to have the competence to improve their business performance by navigating interaction with their partners (Ganjeh et al., 2020; Milovanovic et al., 2020; Yue et al., 2022). Entrepreneurial competence has a mediation effect between networking and performance (Al Mamun et al., 2019). The following is the last proposed hypothesis.

H9: Networking improves performance livestock farmers' performance through entrepreneurial competence.

There are some highlighted arguments that lead to research problems. First, there are improvements of animal husbandry contribution to GDP. Second, family-owned farms have larger amount compared to commercial ones. Third, there are no studies that examine entrepreneurial competence in the context of animal husbandry. The research answers the problem of whether entrepreneurial factors improve livestock farmers' performance. The research gives new evidence in this area.

In short, the research aims to examine (1) the direct effect of entrepreneurial skill, market orientation, sales orientation, and networking on entrepreneurial competence; (2) the direct effect of entrepreneurial competence on livestock farmers' performance; and (3) the indirect effect of entrepreneurial skill, market orientation, sales orientation, and networking on livestock farmers' performance through entrepreneurial competence. The research contributes to giving new evidence of entrepreneurial competence in the context of animal husbandry. The research also contributes to the literature about implementing the RBV concept in achieving livestock farmers' performance.

METHODS

The research population includes all livestock farmers in the Magelang Regency. Based on the report by Hardjanto (2015), most livestock farmers in the Magelang Regency have lower human resources capacity, leading to lower competence. The sampling method uses random sampling from the population. The number of samples is determined by the method of Slovin (1960). The formula of Slovin (1960) gives benefits to represent a certain condition, which, in the research, is a condition of livestock farmers. The sample calculation can be seen in Equation (1).

$$\begin{aligned} \text{Sample size} &= \frac{\text{Population}}{1 + \text{Population (error)}^2} \\ &= \frac{120,288}{1 + 120,288 (0.05)^2} = 399 \end{aligned} \quad (1)$$

Based on Badan Pusat Statistik (2021), the total number of livestock farmers in the Magelang Regency is 120,228. Error value refers to the significance level of the research, which is 5% (0.05). Equation (1) shows that the total sample is 399 respondents.

The research uses primary data that are collected directly from livestock farmers. For livestock farmers' performance, quantitative data, including total revenues and expenses, are collected. The data are collected using a questionnaire for entrepreneurial skill, market orientation, sales orientation, networking, and entrepreneurial competence. Following Al Mamun et al. (2019), the research uses 7-Likert scale questionnaires (from strongly disagree to strongly agree).

The dependent variable is livestock farmers' performance. Livestock farmers' performance is measured by the ratio of revenues to expenses (Amili et al., 2020). Profitable livestock farmers' performance occurs when the ratio of revenues to expenses is

above 1 since revenues are higher than expenses. The calculation of the ratio of revenues to expenses can be seen in Equation (2) (Amili et al., 2020).

$$\text{The ratio of revenues to expenses} = \frac{\text{total revenues}}{\text{total expenses}} \quad (2)$$

Independent variables are entrepreneurial skills, market orientation, sales orientation, and networking. The questionnaires include four items on entrepreneurial skill, four items on market orientation, four items on sales orientation, and six items on networking by Al Mamun et al. (2019), which have been adjusted in the context of livestock farming. The mediating variable is entrepreneurial competence. The questionnaire also includes four items of entrepreneurial competence (Al Mamun et al., 2019) that have been adjusted with the context of livestock farming. Details of the questionnaire items can be seen in Table 1.

Table 1 Research Questionnaire

Variable	Items	Code
Entrepreneurial Skill	I consider myself very creative	ES1
	I have adequate problem-solving skills	ES2
	I possess a high level of leadership	ES3
	I possess the adequate entrepreneurial skills to manage the livestock husbandry	ES4
Market Orientation	I am quick to identify changes in customers' preferences	MO1
	I ask customers to assess the quality of livestock products	MO2
	I make immediate responses when competitors meet my customers' needs	MO3
	As the owner of a husbandry business, I sell livestock products based on real market needs	MO4
Sales Orientation	I am concerned about customers' weaknesses, so I can put pressure on them to buy	SO1
	I will promote livestock products even if I am not sure whether it is right for the customers	SO2
	I will make interesting pictures of livestock products	SO3
	I spend more time persuading customers to buy than discovering their needs	SO4
Networking	I frequently communicate with actual and potential business network partners	NT1
	I have a high number of business network partners	NT2
	My network is very diverse	NT3
	My network is very dense	NT4
	My network partners frequently provide me with new information	NT5
	I receive extensive support from my network partners	NT6
Entrepreneurial Competence	I identify livestock products that customers want	EC1
	I develop long-term trusting relationships with others	EC2
	I negotiate with others	EC3
	I recognize and work on my shortcomings	EC4

Source: Al Mamun et al. (2019)

Data analysis uses Structural Equation Modeling (SEM), which includes validity, reliability, model fitness, and path analysis. Validity and reliability tests examine whether questionnaires are valid and reliable (Hair et al., 2022). The validity test uses the loading factor and Average Variance Extracted (AVE). The cut-off values of the loading factor and AVE are 0.7 and 0.5, respectively (Hair et al., 2022). The values above 0.7 and 0.5 indicate that the questionnaires are valid. Meanwhile, the reliability test uses Cronbach's alpha and composite reliability. The cut-off values of Cronbach's alpha and composite reliability are 0.7 (Hair et al., 2022). The values above 0.7 indicate that the questionnaires are reliable.

Model fitness test examines whether the model is fit (Hair et al., 2022). The research uses Chi-square, Normed Fit Index (NFI), Standard Root-Mean-Square Residual (SRMR), Root Mean Square Theta (RMS Theta), and Variance Inflation Factors (VIF) as indicators of model fitness. Chi-square aims to examine variable sufficiency (Henseler et al., 2014). The cut-off value for Chi-square is the value of its table (Hair et al., 2022). NFI examines data suitability with the model (Henseler et al., 2014) with a cut-off value of 0.90 (Hair et al., 2022). SRMR studies model specification (Henseler et al., 2014). The cut-off value for SRMR is 0.08 (Hair et al., 2022). Next, RMS Theta aims to examine error correlations (Henseler et al., 2014), and its cut-off value is 0.12 (Hair et al., 2022). VIF examines multicollinearity conditions (Henseler et al., 2014), with a cut-off value of 3.3 (Hair et al., 2022). Last, path analysis is used to examine research hypotheses. Hypotheses are accepted if coefficient values are positive, and t-statistics are significant (Hair et al., 2022).

RESULTS AND DISCUSSION

Table 2 shows the respondents' gender, type of livestock, and age. There are 42 female (10.53%) and 357 male livestock farmers (89.47%). Then, the type of livestock is various: 9 livestock farmers for beef cattle (2.26%), 1 livestock farmer for buffalo (0.25%), 10 livestock farmers for goat (2.51%), 10 livestock farmers for sheep (2.51%), 174 livestock farmers for broiler (43.61%), and 195 livestock farmers for laying hens (48.87%). Then, most of the livestock farmers are 40–50 years old (40.10%). The result is followed by 51–60 years old (39.85%), and above 60 years old (13.78%), and under 40 years old (6.27%).

Table 3 shows that the lowest entrepreneurial skill is 1.25, while the highest is 5.25. On average, each livestock farmer has an entrepreneurial skill of 3.33 with a deviation of 1.02. Next, the lowest market orientation is 1.25, while the highest is 6.25. On average, each livestock farmer has a market orientation of 3.65 with a deviation of 1.11. Meanwhile, the lowest sales orientation is 1.25, while the highest market orientation is 5.25. On average, each livestock farmer has a sales orientation of 3.33 with a deviation of 1.09. Then, the lowest networking is 1.33, while the highest market orientation is 5.66. On average, each livestock farmer has a network of 3.85 with a deviation of 1.21. The lowest entrepreneurial competence is 1.25, while the highest is 5.50. On average, each livestock farmer has an entrepreneurial competence of 3.25 with a deviation of 1.12. Last, the lowest performance is 0.23 (revenues are lower than expenses) while the highest is 2.14 (revenues are higher than expenses). On average, each livestock farmer has a performance of 0.56 (revenues are lower than expenses) with a deviation of 1.12.

Table 2 Respondents' Characteristics

Characteristics	Category	Respondents	Percentage
Gender	Female	42	10.53%
	Male	357	89.47%
Livestock	Beef Cattle	9	2.26%
	Buffalo	1	0.25%
	Goat	10	2.51%
	Sheep	10	2.51%
	Broiler	174	43.61%
	Laying Hens	195	48.87%
Age	Under 40 Years Old	25	6.27%
	40–50 Years Old	160	40.10%
	51–60 Years Old	159	39.85%
	Above 60 Years Old	55	13.78%

Table 3 The Results of Descriptive Statistics

Variable	Minimum	Maximum	Mean	Standard Deviation
Entrepreneurial Skill	1.25	5.25	3.33	1.02
Market Orientation	1.25	6.25	3.65	1.11
Sales Orientation	1.25	5.25	3.33	1.09
Networking	1.33	5.66	3.85	1.21
Entrepreneurial Competence	1.25	5.50	3.25	1.12
Performance	0.23	2.14	0.56	0.09

Table 4 The Results of Validity and Reliability Tests

Variable	Code	Loading Factor	Average Variance Extracted	Cronbach's Alpha	Composite Reliability
Entrepreneurial Skill	ES1	0.813	5.371	7.977	7.448
	ES2	0.856			
	ES3	0.847			
	ES4	0.788			
Market Orientation	MO1	0.861	5.793	8.203	7.767
	MO2	0.834			
	MO3	0.843			
	MO4	0.844			
Sales Orientation	SO1	0.712	6.893	9.019	8.683
	SO2	0.903			
	SO3	0.914			
	SO4	0.854			
Networking	NT1	0.779	6.001	8.654	8.213
	NT2	0.819			
	NT3	0.836			
	NT4	0.919			
	NT5	0.906			
	NT6	0.911			
Entrepreneurial Competence	EC1	0.915	6.491	8.992	8.499
	EC2	0.899			
	EC3	0.842			
	EC4	0.898			

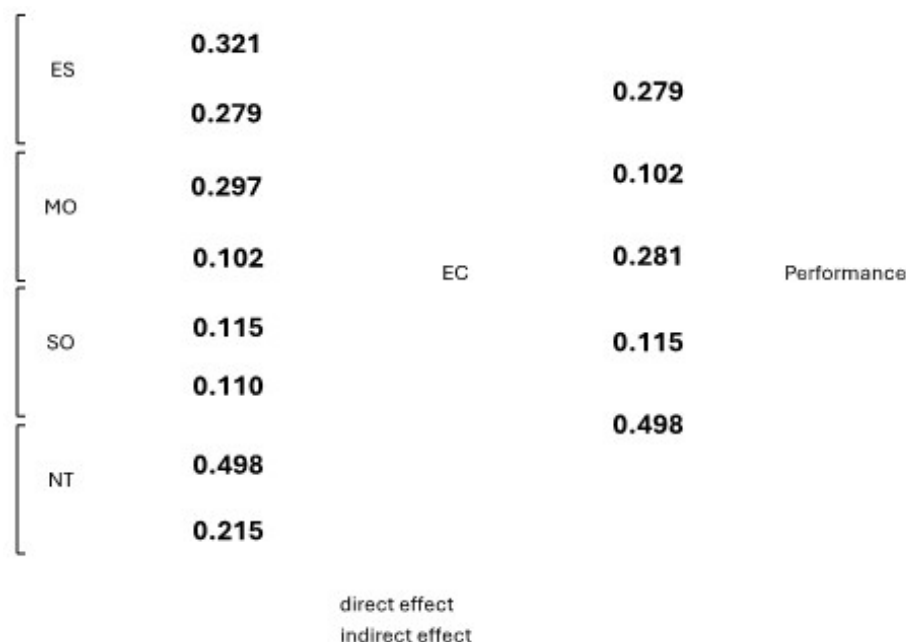
The validity test uses the loading factor and AVE. Table 4 shows that the values of the loading factor and AVE are above 0.7 and 0.5, which indicates that the questionnaire is valid. Meanwhile, the reliability test uses Cronbach's alpha and composite reliability. The results show that the values of Cronbach's alpha and composite reliability are above 0.7. It indicates that the questionnaire is reliable.

Based on Table 5, the Chi-square is 13.444 (below 434.556). It indicates that a sufficient number of variables occur. Then, the value of NFI is 0.938 (above 0.90), meaning that the model fits with the data. The value of SRMR is 0.065 (below 0.08). There is no misspecification model. Then, the value of RMS theta is 0.090 (below 0.12) indicating a small error correlation.

Based on Figure 3 and Table 6, the path of entrepreneurial skill on entrepreneurial competence has a coefficient value of 0.321 with a t-statistic of 3.745 (significant in 0.01) and a significance value of 0.000. The result shows that H1 is accepted. Entrepreneurial skill improves entrepreneurial competence. Similarly, the path of market orientation on entrepreneurial competence has a coefficient value of 0.297 with a t-statistic of 2.895 (significant in 0.01) and a significance value of 0.002. The result shows that H2 is accepted. Market orientation improves entrepreneurial competence. The path of sales orientation on entrepreneurial competence has a coefficient value of 0.110 with a t-statistic of 1.791 (significant in 0.05) and a significance value of 0.037. The result shows that H3 is accepted too. Sales orientation improves entrepreneurial competence.

Table 5 The Results of Model Fitness

Test	Result	Cut-off values	Conclusion
Chi-Square	13.444	434.556 (based on the Chi-square table)	A sufficient number of variables
Normed Fit Index (NFI)	0.938	Above 0.90	Model fitting data
Standard Root-Mean-Square Residual (SRMR)	0.065	Below 0.08	No problem of misspecification model
Root Mean Square Theta (RMS Theta)	0.090	Below 0.12	Small error correlation
Variance Inflation Factors (VIF)	Below 3.3	Below 3.3	No multicollinearity problems



Note: Entrepreneurial Skill (ES), Market Orientation (MO), Sales Orientation (SO), Networking (NT), and Entrepreneurial Competence (EC)

Figure 3 The Results of Structural Modelling

Table 6 The Results of Path Analysis

Hypotheses	Path	Coefficient	T-Statistic	Significance
H1	Entrepreneurial Skill → Entrepreneurial Competence	0.321	3.754*	0.000
H2	Market Orientation → Entrepreneurial Competence	0.297	2.895*	0.002
H3	Sales Orientation → Entrepreneurial Competence	0.110	1.791**	0.037
H4	Networking → Entrepreneurial Competence	0.215	2.266**	0.012
H5	Entrepreneurial Competence → Performance	0.281	2.763*	0.003
H6	Entrepreneurial Skill → Entrepreneurial Competence → Performance	0.279	2.666*	0.004
H7	Market Orientation → Entrepreneurial Competence → Performance	0.102	1.668**	0.048
H8	Sales Orientation → Entrepreneurial Competence → Performance	0.115	1.767**	0.039
H9	Networking → Entrepreneurial Competence → Performance	0.498	4.825*	0.000

Note: *Significant at 0.01, **Significant at 0.05

The networking path on entrepreneurial competence has a coefficient value of 0.215 with a t-statistic of 2.266 (significant in 0.05) and a significance value of 0.012. H4 is accepted that networking improves entrepreneurial competence. Similarly, the path of entrepreneurial competence on livestock farmers' performance has a coefficient value of 0.281 with a t-statistic of 2.763 (significant in 0.01) and a significance value of 0.003. H5 is also accepted. Entrepreneurial competence improves livestock farmers' performance.

The path of entrepreneurial skill on livestock farmers' performance through entrepreneurial competence has a coefficient value of 0.279 with a t-statistic of 2.666 (significant in 0.01) and a significance value of 0.004. H6 is accepted. Entrepreneurial skill improves performance livestock farmers' performance through entrepreneurial competence. In addition, the path of market orientation on livestock farmers' performance through entrepreneurial competence has a coefficient value of 0.102 with a t-statistic of 1.668 (significant in 0.05) and a significance value of 0.048. H7 is accepted too. Market orientation improves performance livestock farmers' performance through entrepreneurial competence.

The path of sales orientation on livestock farmers' performance through entrepreneurial competence has a coefficient value of 0.115 with a t-statistic of 1.767 (significant in 0.05) and a significance value of 0.039. H8 is accepted that sales orientation improves performance livestock farmers' performance through entrepreneurial competence. At the same time, the path of networking on livestock farmers' performance through entrepreneurial competence has a coefficient

value of 0.498 with a t-statistic of 4.852 (significant in 0.05) and a significance value of 0.000. H9 is accepted. Networking improves livestock farmers' performance through entrepreneurial competence.

Based on data analysis, there are several findings. First, entrepreneurial skills, market orientation, sales orientation, and networking improve entrepreneurial competence. This result is consistent with Al Mamun et al. (2019) that entrepreneurial skill, market orientation, and networking improve entrepreneurial competence. Similarly, according to Silitonga et al. (2024), sales orientation improves entrepreneurship performance. This result also confirms that RBV captures entrepreneurial skill, market orientation, sales orientation, and networking as valuable research to create a competitive advantage of entrepreneurial competence.

Entrepreneurial competence is established when there is a set of skills to develop and manage the business characteristics to run the strategy effectively and make a good decision to improve the business. It is also built by orientation to fulfill customers' needs and expectations and create sales. Then, it occurs when entrepreneurs develop and maintain networking with business partners. In the context of livestock husbandry, family-owned farms must have skills problem solving, creativity, managerial ability, market identification, customer identification, and networking so livestock farmers can establish the entrepreneurial competence to identify livestock that customers want, develop relationships with suppliers, negotiate with partners, and know what to do to generate higher livestock quality.

Second, the research finds that entrepreneurial

competence improves livestock farmers' performance. This result is consistent with Al Mamun et al. (2019) that entrepreneurial competence improves business performance. This result also confirms the concept of RBV where competitive advantage of entrepreneurial competence leads the business to achieve better performance. When livestock farmers have entrepreneurial competence to identify livestock that customers want, develop relationships with suppliers, negotiate with partners, and know how to generate higher livestock quality, livestock farmers will generate more revenues and pay the expenses efficiently. Customer identification and livestock quality can bring more sales and revenues. Furthermore, negotiation skills and good relationships with suppliers lead livestock farmers to pay less expenses.

Third, the research also finds that entrepreneurial skills, market orientation, sales orientation, and networking improve livestock farmers' performance through entrepreneurial competence. This result is consistent with Al Mamun et al. (2019) that entrepreneurial skill, market orientation, and networking improve business performance through entrepreneurial competence. According to Hendiarto and Musthafa (2023), marketing competence has a mediation effect between sales orientation and sales performance. This result confirms the concept of RBV, where the use of resources tends to create a competitive advantage that can bring the final output of business performance.

The results imply that livestock farmers increase entrepreneurial competence by building entrepreneurial skills, market orientation, sales orientation, and networking to improve performance. Once farmers have creativity, they can solve the problem and lead and manage the business. Farmers can also identify customers' needs, sell the products, and build the network and competence. Hence, it will lead farmers to have high performance. The results imply that regulators can formulate regulations or programs to help livestock farmers to grow their businesses. For example, Direktorat Jenderal Peternakan dan Kesehatan Hewan Kementerian Pertanian can make regulation and socialization for farmers to improve the competences of creativity, problem-solving, management, customer identification, product sales, and networks.

CONCLUSIONS

The research aims to examine (1) the direct effect of entrepreneurial skill, market orientation, sales orientation, and networking on entrepreneurial competence, (2) the direct effect of entrepreneurial competence on livestock farmers' performance, and (3) the indirect effect of entrepreneurial skill, market orientation, sales orientation, and networking on livestock farmers' performance through entrepreneurial competence. Based on data analysis,

the research finds that entrepreneurial skill, market orientation, sales orientation, and networking improve entrepreneurial competence. Then, entrepreneurial competence increases livestock farmers' performance. Lastly, entrepreneurial skill, market orientation, sales orientation, and networking improve livestock farmers' performance through entrepreneurial competence.

The research has some implications. First, livestock farmers can increase entrepreneurial competence by building entrepreneurial skills, market orientation, sales orientation, and networking so that performance can be improved. Second, regulators can formulate regulations or programs that can help livestock farmers to grow their businesses since the business is run individually, such as human resource development or business establishment programs. According to the descriptive statistics, entrepreneurial competence achieved by livestock farmers in Magelang Regency is still low.

Nevertheless, the research has some limitations. First, the research only captures household-owned farmers who consider the farming as a secondary income. The research does not capture commercial farms, which considers the farming as a primary business. Future research is expected to examine the case of commercial farms. Second, the research only examines respondents in Magelang Regency because of resource limitations. To be generalized, future research is expected to examine livestock farmers in other locations in Indonesia.

Moreover, future research is also expected to expand the research objectives by considering the effect of local culture, religion, and position of women in business or family businesses on livestock performance. Local culture can determine customers' behavior that relates to product sales. Religion, female leaders, and family business can also determine how risk-taking, strategy, and management will be performed by entrepreneurs. Lastly, the research can be expanded into other fields of business, such as trade or crafts. There is a possibility that household farmers' characteristics are different from other business characteristics in Magelang Regency, including trade and crafts. In this case, characteristic differences lead to different needs for entrepreneurial skill and competence.

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