

# THE IMPACT OF PROMOTING THE LIVESTOCK FARMING DEVELOPMENT IN KAZAKHSTAN

AIGUL ISSAYEVA<sup>1\*</sup> and SITI AIDA SAMIKON<sup>2</sup>

<sup>1,2</sup> Faculty of Business and Management, Limkokwing University of Creative Technology, Malaysia.

\*Corresponding Author Email: isaeva\_aigul\_92@mail.ru

## Abstract

Promoting livestock farming development has gradually created an enormous challenge due to various issues associated with enhancing farming strategies to improve the development of livestock farming. The availability of credits, innovation, and farming training has been identified as challenges that hinder the continuous growth of livestock farming development in Kazakhstan. These challenges trigger the farmers' low GDP, poverty, and low quality of life towards promoting their well-being. Hence, this study aimed to examine the impact of promoting livestock farming development in Kazakhstan. The adoption of simple random helps collect data from the questionnaires for the quantitative analysis concerning livestock farming development. The survey was self-administered to the farmers based on adopting and adapting the theories and previous studies as a research instrument for collecting data and validating using expert review and pre-testing. A sample of 200 farmers was selected based on the random sampling technique. The researcher received a sample of 175 questionnaires, with success and a response rate of 87.5%. Next, 30 samples of pilot study data were validated using Exploratory Factor Analysis (EFA). Later, the field study data were analysed using IBM-SPSS version 28.0 for the regression analysis to test the hypotheses. This study confirmed a significant and positive correlation between the availability of credits, innovation, farmer training and livestock farming development. In addition, the results from regression analysis showed that the availability of credits, innovation, and farmer training helps promote livestock farming development in Kazakhstan. In conclusion, the availability of credits, innovation, and farmer training helps to improve the development of livestock farming. Enhancing access to credits and farmer training has impacted the success rate of promoting livestock farming in Kazakhstan. This study is significant in addressing the gap found in the previous studies while contributing to the body of knowledge and promoting livestock farming development in Kazakhstan.

**Keywords:** Livestock Farming Development, Availability of Credit, Innovation, Farmer Training.

## INTRODUCTION

The livestock farming development has been experiencing a drastic loss and is one of Kazakhstan's major agricultural branches. Livestock farming produces 47% of the gross agricultural product volume, which helps to create and sustain GDP growth (Sadu, Kusheba & Kuhar, 2021). The significance of this branch is strongly influenced not only by its high share of agricultural GDP but also by its significant contribution to the agriculture industry. It is also vital for domestic and foreign customers as a food manufacturer. However, many challenges are being faced by this sector and which have crippled the farmer's sustainability (Nurgalieva et al., 2021). During the years of economic reforms in Kazakhstan, the consumption of meat and meat products decreased significantly. Kerimova (2021) stated that meat consumption per capita was 68 kg in 2019 and decreased in 2021 to 45 kg. The revival of the livestock sector in Kazakhstan can contribute significantly to the growth of agriculture, support rural livelihoods, especially among poor rural households, and use the extensive land

resources available (Nurtayeva et al., 2021). Livestock farming in Kazakhstan is not new; it goes back to the 2nd millennium when it started with people rearing cattle, horses, camels, sheep and goats. Efficient raw meat processing contributed to improved product production and increased the meat industry revenue. It also raises high domestic food production for customers (Agumbayeva, 2021). Demand for domestic products is essential for increasing the production of the required meat quality in the agricultural livestock industry. In Kazakhstan, livestock farming development encountered various issues such as availability of credits, innovation, and farmer training, which has suffered the success of livestock farming development. It further creates farmer instability in managing their farming and livestock to yield future growth. Kazakhstan has lost 19.6% of GDP and recorded a decline of 26.1% in livestock development from 2018 to 2021 due to poor availability of credits, lack of innovation, and inadequate farmer training that would have helped to navigate the success of the sector. The population growth of human capital, increasing urbanisation, and increasing incomes are driving a massive increase in the demand for food of animal origin (milk, meat, eggs) in developing countries and more than ever in developed countries (Ospanov & Kulzhanova, 2020). However, they faced challenges leading to insufficient beef producers, integration of production, low migration of products, and an enormous unemployment rate. In addition, the challenges further lead to poor feeding and animal health by farmers due to poor training, no utilisation of technology, low productivity and low genetic potential due to lack of innovation. In addition, only 30% is used for grazing out 182.2 million hectares of Kazakhstan's pastures, while 70% of agricultural land is left out and dehydrated (Biymendeev, 2021; Akimbekova, 2021).

Reforms in the agricultural sector, which are not sufficiently substantiated by science, have led to a decline in agricultural production, primarily cattle breeding. The structure of the agricultural sector, especially its vegetation and cattle breeding, has changed dramatically. However, conventional stock per capita was reduced to 16.6 million in 2020 and reduced to \$7.5 million by 55%, thereby declining the total production of livestock products decreased by 77% (Akimbekova & Kaskabaev, 2021). The livestock farming sector reduces its proportion of agriculture enterprises due to declining livestock production. It further makes the sector incur monthly losses, affecting the farmer's sustainability in managing its enterprises. In the local horizon of Kazakhstan, most animal foods are consumed by small family farms, where livestock is often combined with agriculture or shepherds, thereby reducing the growth of livestock farming development (Konuspayev et al., 2021).

Despite the industry's declining growth, other factors hinder the sustainability of livestock farming, such as poor infrastructure, which has negatively influenced the required growth needed in the industry. As a result, there is minimal growth in the livestock industry in Kazakhstan (Bazarbayev, Tundikbayeva & Kupeshova, 2020). From this angle, the availability of credit has instilled low confidence in the farmers, thereby hindering the success of maximising their future growth. Lack of financial support decreases the farmer's diversification in exploring different opportunities to boost livestock farming development. Poor innovation has contributed to high loss for the farmers in providing strategic plans and activities that would increase the success of livestock farming. It further reduces the innovative

ways farmers could explore to add value to its production to boost their customer demand and increase satisfaction and profitability. Farmer training is lacking among the livestock industry players, hindering their skills and knowledge in managing their enterprises. Aiguzhinova (2021) found that farmer training contributes to livestock development in Kazakhstan. However, in the local context, more empirical evidence is needed to prove it. The contribution to human nutrition by livestock products is significant because it is a major source of high-quality protein. However, a lack of availability of credits, poor innovation and farmer training have not been adequately utilised for livestock farming development. Also, there isn't much attention to the innovation factor on the need to use technology to generate better livestock production outputs. However, livestock farming development creates vast challenges, such as the availability of credits, innovation, and farmer training in livestock farming development, which prompted this study's root cause to promote livestock farming development in Kazakhstan. These challenges suggest that researchers investigate the impact of promoting livestock farming development in Kazakhstan.

## LITERATURE REVIEW

### Livestock Farming Development

Livestock farming development is known for supporting the global food system, food security and poverty reduction. The importance of livestock development does not stop there; currently, slightly more than the world's population lives in cities, which is expected to increase to 60 per cent by 2030 (Moseley, 2022). It raises serious questions about food insecurity, malnutrition and environmental pollution. This study refers to raising the quality of livestock and offering the consumer milk, cheese and meats of the highest quality, promoting entrepreneurship and changing production systems, resulting in raising economic growth in return (Pickworth & Adams, 2022). Livestock is capital assets produced in the past and contributes to future product output. Investment in, or the acquisition of, livestock involves saving or borrowing, justified by the expected future return on capital. The 'landless' livestock production systems represent labour-using technology in that labour requirements per hectare (devoted to feeding production) are higher than in other systems.

Conversely, animal draught power is labour-saving, reducing hand-labour requirements, particularly at peak work periods. Using the plough may allow a more significant proportion of the farmed area to be cultivated yearly, increasing cropping intensity (Yoon, Choi & Lee, 2022). Mixed crop-livestock production systems are essential as the source of the bulk of ruminant livestock production and the home of most of the poor. As intensity and numbers rise, crop-livestock interactions become increasingly competitive for land use and other resources. There is little interaction between crops and supplementary, landless livestock systems. Landless livestock systems provide most of the world's pig and poultry meat production. The majority is produced in developed countries and from large-scale commercial enterprises, now spreading in developing countries (Mugonya & Hauser, 2022). As part of its commitment to helping countries build sustainable, nutritious food systems, the World Bank is moving its livestock investments towards greater sustainability and climate-smart outcomes. All

investments are designed with mitigation and adaptation in mind. Over the last three years, an average of 61% of livestock financing has been directly tied to climate co-benefits (up from 55% in the previous period) (Tabe, Hauser & Mausch, 2022). Bank-supported projects seek to improve various dimensions of livestock systems and value chains. They use levers such as efficiency gains, balancing animal rations and sustainable sourcing of feeds, carbon sequestration in agricultural landscapes, energy-efficient technologies and renewable energy sources, animal health and welfare, and better manure management (Asmare, 2022).

### **Availability of Credit**

Livestock enterprise has as its main characteristic being operated or created by an entrepreneur due to factors such as unemployment, generation of higher incomes, knowledge of the activity or professional development (Okyere & Usman, 2021). The above shows the impulses that have made this sector the largest generator of jobs and income in the country. (Mugonya & Hauser, 2022). Buriak, Boiko & Demianenko (2021) found a lack of financing as one of the livestock development barriers. It is the technique of finance that aims to study and evaluate economic events in all operations carried out and that serves to make decisions in the achievement of initial objectives. Another study by Abramova (2019) found financing determines the livestock development in entrepreneurship ventures in Kazakhstan. According to Wang, Zhong, Guo and Fu (2021), managing financial resources is essential and is thought to be a pivotal point in achieving objectives. These resources are among the most important within a livestock enterprise. Therefore, it is necessary to use them carefully to take advantage of them in the best way in the investments made in the entity. Currently, the business world has become a constant struggle due to globalisation and technological advances. Therefore, it is now necessary to have more competitive companies that use financial administration as a determining tool and thus have the necessary monetary resources for the correct development in the operations carried out in the organisation.

Every livestock entrepreneur has to decide which path the enterprise should take. Decision-making is choosing between several alternatives, the best option. With this, the livestock entrepreneur can get more information; it also promotes the involvement of people within the enterprise by committing to decisions taken. Then if this situation happens on another occasion, the preceding mark becomes repetitive decision-making (Kantoroeva & Toktomamatova, 2021). Every decision lead to a degree of uncertainty and, therefore, a risk; when taking it. Hence, the livestock entrepreneur must assume these alternatives' risks and future aspects. That is why it is of the utmost importance that the necessary information is collected, in addition to using the tools available since the financial part is of the utmost importance in livestock enterprise because they demonstrate the behaviour that the company has had in the operations that have made (Mhitaryan, 2021). The stakeholder needs financial support to facilitate the livestock entrepreneur, which would help boost productivity and performance. Lastly, using financial tools to generate financial assistance tends to help make decisions that directly influence the financial structure of the livestock entrepreneurs' development.

## **Innovation**

Innovation is the multi-stage process through which organisations transform ideas into improved products, services or processes to advance, compete and differentiate successfully in their market (Hilmiati, 2020). Improving efficiency in animal production will require new scientific approaches to technologies that are used, which can generate conflicts between new products or processes (Moseley, 2022). Ahmad, Ahmad and Rakhmat (2020) discussed the linear model of innovation in animal production, where universities and research centres focus their efforts on generating a process or product based on cooperation. However, the reality of the consumer market is creating a new governance model, where innovation demands mean that the inter-institutional cooperation networks have not been sufficiently agile to act in this scenario. Access to technological innovation is a competitive factor for animal production systems. In this sense, Olmstead (2020) developed and validated specific methodologies to assess the competitiveness of beef cattle on a farm.

The method used farmers' questionnaires to analyse the competitiveness drivers and their respective factors. At the same time, they identified the threats and opportunities for internal competitiveness, leading to an index of competitiveness for the production systems. The results showed the extent to which raising the level of competitiveness of the systems increased the demand for technological innovation. However, the studies also identified flaws in the system of access and diffusion of new technologies. Moreover, individualism in sector agents also constitutes a barrier to access and introduction of new technologies. Hirniak (2021) found that the most significant difficulties in using technological innovations in milk production systems included a lack of training, information asymmetry, and the transfer of new information and processes. Understanding the signs of innovation to consumers and the information consumers expect from animal production systems may facilitate research for scientific advancement and greater integration with society (Istomin & Ivanov, 2021). Innovation would help the livestock industry create a product with superior performance, quality and features that will attract customers.

## **Farmer Training**

Farmer training refers to intervening in developing competitiveness, which helps to boost either or within the market towards promoting livestock enterprise (Lamm, Powell & Lamm, 2020). The farmer can also interfere with the personality and attitudes or feelings of the group of people or work group. Samad, Muchiri and Shahid (2022) state that the qualities that researchers identified in the farmer throughout history must be the same as the leaders of the interactive social enterprises. Ahmed and Salim (2019) found that farmer training contributes to livestock development in South Africa. The farmer is a referential figure within a group of people that work extensively towards enhancing livestock production to promote its income effectively. As Ye, Liu and Tan (2022) point out, they indicate the importance of farming training helps to influence the fact that its exercise directly affects decision-making processes and enterprise outcomes. Steinfeld (2022) utilised farmer training to enhance livestock farming development.



It further helps to navigate the strategic plans, activities and decision-making in ensuring its high success rate. Farmer training intervenes in many aspects and results in the organisation; therefore, the success or failure of the livestock enterprise is reflected. The farmer has a significant influence and responsibility in implementing any strategic change process that would promote livestock production to boost its development. In the current era, changes and uncertainties emerge, and decision-making in times of crisis requires an effective and efficient farmer to face external and internal challenges (AlAli & Nasser, 2021).

The farmer’s training in terms of skills, qualities and characteristics influence the paradigms in a participatory manner that would enhance the success rate of livestock farming development. Here, a farmer’s styles influence society’s challenges with technological and economic dynamics, adding to the culture with changes that arise. According to Dayat and Anwarudin (2020), “there is no more important task in the progress of the farmers’ strategy than to identify the competencies and meta-competencies that make up a successful farmer.

Hwang and Krasa (2022) found that participatory farmers foster innovation at the team level by engaging in the decision-making process and acting in line with adequate supervision to boost livestock farming development. Shen and Lei (2022) find that adequate farmer training would help to drive skills, competence, and innovation processes through control, supervision, instruction, and hierarchical influence in the livestock farming development of Kazakhstan.

### Conceptual Framework

The conceptual framework was adopted and supported by several theoretical studies relating to livestock farming development. It further affirms that the availability of credits, innovation, and farmer training help promote livestock farming development. Therefore, this study focuses on promoting livestock farming development in Kazakhstan.

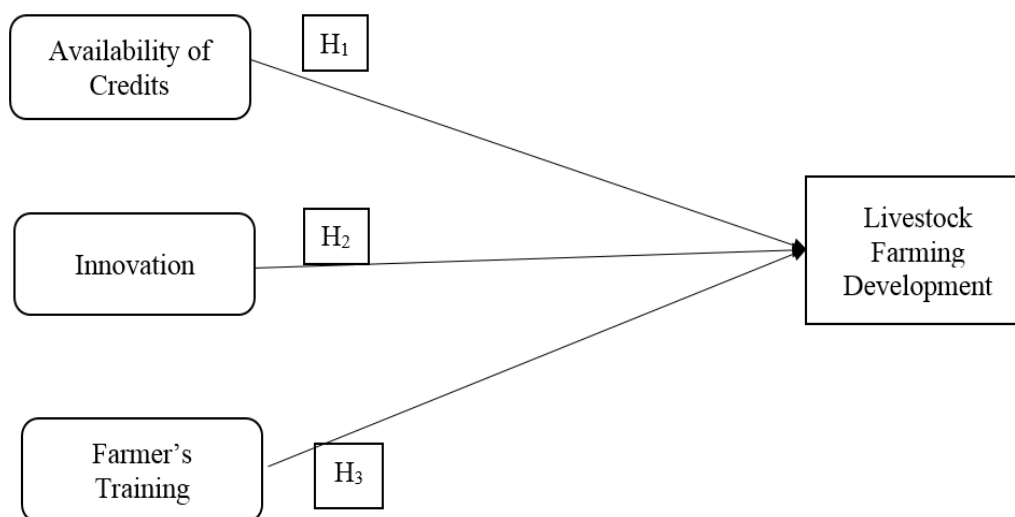


Figure 1: Conceptual Framework of the Study

## Research Hypotheses

- H<sub>1</sub>:** There is a significant relationship between the availability of credit and livestock farming development.
- H<sub>2</sub>:** There is a significant relationship between innovation and livestock farming development.
- H<sub>3</sub>:** There is a significant relationship between farmer's training and livestock farming development.

## RESEARCH METHODOLOGY

The researcher adopted descriptive and correlational designs to help analyse the data generated from the questionnaire distributed to the respondents (Litwin, 2014). The farmers are the respondents, and their opinions help to ascertain the livestock farming development in Kazakhstan. The population of this study is 31,000 farmers residing in Kazakhstan, which helps to generate a sample size of 175 with the aid of a survey collected. The target population was supported by the statistical table obtained from Krejcie & Morgan in determining the sample size of this study (Krejcie & Morgan, 1970). Before embarking on data collection, the questionnaire was designed with 5 Likert intervals and validated by experts, leading to the Pilot study in ascertaining the reliability of the items. Thirty (30) questionnaires were used to conduct the pilot study, proving that the result ranged from 0.801 to 0.925 (Jacqueline, 2013; Bryman & Bell, 2018). In addition, the exploratory factors analysis was conducted, confirming a significant relationship between the availability of credits, innovation, farmer participation and livestock farming development. The KMO ranged from 0.752 to 0.864, the p-value < 0.05, and the loading factors for each item were above 0.7 with a benchmark of 0.6 extractions (Mark & Adrian, 2019). The field study was conducted with the aid of a self-administered survey, which helps to generate ideas or opinions on the strategies that help promote livestock farming development. Two hundred (200) questionnaires were distributed amongst the farmers, and 175 questionnaires were collected, giving a response and success rate of 87.5%. The data were analysed using the statistical tool of SPSS (version 28.0) to analyse the following tastings: descriptive, normality, correlation analysis and regression analysis (Shiau, Sarstedt & Hair, 2019).

## RESULTS

### Demographic Analysis

Table 1 revealed that the age group of 38-47-year-old has the highest respondent rate of 40.0%, which affirmed that the advanced farmers in age participated in this study. The gender of the respondents indicates that male has the highest rate of 46.0%. Based on the marital status of the respondents, it affirmed that married farmers are the highest rate of 72.6% involved in this study. The income level of the respondents confirmed that less than 500 USD has the highest rate of 52.0 and the education level indicates that a bachelor's has the highest rate of 43.4% participated in this study. From the overall analysis, it agreed that the respondents involved in

this study exhibit an advance in age, which indicates that they are married with responsibilities to take care of the family’s needs. It further concluded that they earn a low income, which was the reason that initiated this study to provide solutions to promote farmers’ quality of life and improve their livestock farming development in Kazakhstan.

**Table 1: Demographic Analysis**

Items	Frequency (n = 175)	Percentage (%)	Items	Frequency (n = 175)	Percentage (%)
<b>Age Group</b>			<b>Income Level (USD)</b>		
18 – 27 years old	23	13.1	Up to 500 USD	91	52.0
28 – 37 years old	45	25.7	501–1,000 USD	45	25.7
38 – 47 years old	70	40.0	1,001–1,500 USD	15	8.6
Above 48 years old	37	21.1	Above 1501 USD	24	13.7
<b>Gender</b>			<b>Education Level</b>		
Male	98	56.0	High School	31	17.7
Female	77	44.0	Diploma	37	21.1
<b>Marital Status</b>			Bachelor	76	43.4
Married	127	72.6	Master	22	12.6
Single	15	8.6	Doctorate	9	5.1
Others	33	18.9			

**Normality Analysis**

The skewness and kurtosis were adopted to verify if the questionnaires are distributed normally among employees in an organisation (Bell, Bryman & Harley, 2018). Mark and Adrian (2019) stipulate that data considered distributed normally, the results must fall within the range of +2 and -2. The results proved that all the constructs (availability of credits, innovation, farmer training and livestock farming development) met the criteria of +2 or -2. Also, these results affirmed that the skewness values fall within (-0.477 to -0.911), and kurtosis values were (0.432 to 0.871). In addition, these findings met the criteria of the existing rules of normality testing, which proved that all the data generated was normally distributed to the respondents without bias, which helps to provide desirable solutions to the outcome of this study.

**Table 2: Skewness and Kurtosis Values for all Constructs**

Constructs	Final Test (n = 175)	
	Skewness	Kurtosis
Livestock Farming Development	-0.892	0.432
Availability of Credits	-0.578	0.871
Innovation	-0.477	0.707
Farming Training	-0.911	0.436

**Correlation Analysis**

Correlation analysis helps examine the relationship between two or more variables towards projecting the study’s dependent variable (Alan, 2012). This study shows the relationship between the availability of credits, innovation, farmer training and livestock farming



development. Table 3 proved the relationship between the availability of credits (0.825), innovation (0.800), and farmer training (0.850). These findings showed that all the constructs are significant because each construct is less than ( $p < 0.01$ ) and greater than 0.70 as required to meet the criteria of correlation analysis. Also, they are “Good” and exhibit a high correlation level among each construct (Kothari, 2019). Furthermore, this analysis has helped to examine the impact of promoting livestock farming development in Kazakhstan.

**Table 3: Correlations Analysis for all Constructs**

Constructs	1	2	3	4
1. Livestock Farming Development	1			
2. Availability of Credits	.825**	1		
3. Innovation	.800**	.752**	1	
4. Farmers Training	.850**	.809**	.767**	1
Note: ** significant level at $p < 0.01$ (2-tailed)				

### Regression Analysis

Regression analysis indicates that the  $R^2$  value of 0.71 and above must be met for the constructs to be recognised and accepted, further explaining variabilities (Kothari, 2019). Any construct range from 0.30 to 0.70 indicates a moderate variability. The finding demonstrates that the  $R^2$  value is 0.872, which proves that it has 87.2% and exhibits a high level of variability explained by the three (3) constructs: availability of credits, innovation, and farmer training. The analysis considers significant as it has a value of 0.000, while the F-value is 2166.130. In regression analysis, the Durbin-Watson value is 1.751, which met the criteria below 2.0, and this further proved that there is no autocorrelation in the residuals (Kumar, 2014).

The regression analysis was adopted to determine the effect of availability of credits, innovation, and farmer training on livestock farming development in Kazakhstan. It is necessary to check regression analysis assumptions to ensure the validity of analysis results. One of the regression assumptions is that there should not be multicollinearity among independent variables. In addition, it helped to ascertain that this assumption met the tolerance and Variance Inflation Factor (VIF) values examined.

The p-values for each construct were less than the significant level (0.01). Table 4 indicates that the availability of credits ( $\beta=0.782$ ; sig.<0.01), innovation ( $\beta=0.800$ ; sig.<0.01), and farmer training ( $\beta=0.824$ ; sig.<0.01) has helped in promoting livestock farming development. There are three hypotheses ( $H_1, H_2, H_3$ ), and they are accepted, indicating that all the constructs contributed to promoting livestock farming development in Kazakhstan.

The collinearity statistics analysis confirmed that all constructs have no collinearity issues and range from 0.318 to 0.649 as tolerance results. At the same time, VIF ranges from 1.723 to 2.630 (Bell, Bryman & Harley, 2018). The tolerance and VIF values have met the criteria stating that the value of VIF must be lower than 10.0 and the value of tolerance must be greater than 0.1 (Dawes, 2012).

**Table 4: Regression Analysis**

Model		Standardised Coefficients			Collinearity Statistics	
		Beta	t	Sig.	Tolerance	VIF
1	(Constant)		4.109	0.000		
	Availability of Credits	0.782	6.156	0.000	0.515	1.944
	Innovation	0.800	6.816	0.000	0.318	2.630
	Farmers' Training	0.824	8.303	0.000	0.649	1.723
a. Dependent Variable: Livestock Farming Development						

## DISCUSSION

The availability of credits helps to promote livestock farming development by creating diversification and boosts to aid the development of livestock farming (Huang, 2021). Apart from that, finances also play an essential role in enhancing the development of the livestock industry. Compared with the large industry, the livestock industry invests less in innovative technology and uses less sophisticated technical equipment. Difficulty in accessing finance is the main barrier to adopting technological innovation. However, the livestock industry can access financing from banks and financial institutions investing in innovation. Many farmers are characterised by becoming a natural person, although half do so as a legal entity.

The average of its annual sales is approximately 40,000 dollars, and its main challenge is expansion (Lemishko, 2021). For this reason, it is emphasised that livestock enterprise in Kazakhstan represents a tremendous economic value for the country and therefore is the main driver of it. Previous studies found that lack of availability of credit is one of the livestock farming development barriers. It is the technique of availability of credits that aims to study and evaluate economic events in all operations carried out and that serves to make decisions in the achievement of initial objectives. Other studies highlighted that access to credit helps boost financial resources, which is vital in achieving objectives. These resources are among the most important within a livestock farmer enterprise.

Therefore, it is now necessary to have more credit availability that would help sustain the livestock farming development by creating various operations that would help sustain the growth of livestock farming (Khadka & Thapa, 2020). The availability of credits tends to provide a desirable pathway to create opportunities for farmers to boost their livestock farming, increase their incomes, and promote a better quality of life. This study concluded that improving credit availability has successfully helped farmers diversify their livestock business to an optimal level that continuously advanced their edge over their competitors.

Advancing innovation has a positive and significant effect on livestock farming development. Livestock innovation is often promoted as a package of technologies, which are released to the farmers for adoption to improve the productivity of their livestock enterprises (Celestin, 2021). The study confirmed that the innovation is helping farmers access information that can help them make an important decisions out on the farm and help the consumers access information when making a purchase.

Thus, there is power in having real-time information, which has created an advantage for farmers to promote their livestock farming. The attitude and perspectives of the farmers differ on the effective implementation of innovation in promoting livestock farming, which has yielded a high level of performance. Innovation plays an important role in promoting livestock farming and helps the farmers to see other realities where entrepreneurial practices are successfully implemented. Omarov, Kalykov, Niyazbekova and Yessirkepova (2021) found that innovation links significantly to livestock development in Kazakhstan. Innovation plays a vital role in promoting livestock farming and is a key factor guided to success, allowing market capture and the generation of competitiveness and production (Ahmad, Ahmad & Rakhmat, 2020).

The result of this study confirmed the importance of farmer training, which has helped to increase their skills, knowledge and competence to plan, organise, lead and control all the tasks, including leadership tasks such as motivating and inspiring. The result confirmed that livestock farming development needs trained farmers to lead and guide others to attain common goals by establishing responsibility skills and taking risks.

The findings of this study affirmed that farmers' training must support innovation and take a new approach to leadership that would help promote livestock farming development in Kazakhstan. Livestock development is highly competitive either in the market (livestock enterprise) or the livestock enterprise (competitive human factor) (Simão & Silveira, 2021).

Therefore, farmer training needs to adopt to capture the opportunities to innovate and boost financial capability. It further helps to change the livestock enterprises' culture and helps to generate satisfaction for the human factor to be partakers of a change for a positive benefit (Dayat & Anwarudin, 2020). Training farmers helps to advance the skills to implement strategies with attitudes and behaviours where he even seeks to reduce uncertainties and thus negotiate adequate success.

However, the positive and significant effects of availability of credits, innovation, and farmer training promote livestock farming development. It further indicates that credit availability helps boost farmers' financial leverage in developing their livestock. It helps to manage their resources and create a competitive advantage for future sustainability. Innovation has contributed heavily to promoting farmers' livestock development, which requires adequate skills, knowledge and competence to navigate its success.

Training of farmers tends to benefit both farmers and sectors as the farmers acquire the required skills in managing the availability of credit and innovation to boost their livestock farming, which would add value to the GDP of Kazakhstan and the stakeholders.

## CONCLUSION

In conclusion, the study agreed that the availability of credits, innovation, and farmers' training affect livestock farming development in Kazakhstan. Several theories and models have supported this concluding finding that livestock farming development lies in enhancing the easy accessibility of credits, providing innovative strategies and promoting the human capital

by training farmers would be an added value towards promoting the livestock enterprises. The availability of credits has yielded a positive impact on creating an edge for livestock farming development for its stakeholders, which has significantly impacted livestock development in Kazakhstan. Lack of access to credits reduces the farmers' capacity to innovate their production. It would further help to create an added value in competition among rivalry and helps to improve the sustainability of livestock development. In addition, the availability of credit has helped to provide opportunities for farmers to build up their sustainability and promote their quality of life.

Therefore, access to credits has a positive and significant impact on promoting livestock farming development in Kazakhstan. It further agreed that the success of promoting livestock lies in the financial capability or access to credit to enable the stakeholder to boost their production and improve its development. The adoption of innovation in the development of livestock farming has yielded a positive and significant impact, indicating that innovation plays an essential role in sustaining the continuous success of livestock farming development.

Innovation has been identified as a factor that creates value and continuous success and yields income for livestock farming to boost their business ventures. Innovation has proved significant as it has helped to increase the capability of leadership in asserting the right decision-making, leading in its competition orientation, advancing production with the latest innovative technology and acquiring the necessary financing to support livestock development.

In general, this study sheds light on the complex relationship and presents certain concepts of interest relating to this study. This study affirmed that farmer training helps promote farmers' skills and knowledge in making the right decision that promotes livestock development. It further agreed that skills help to facilitate the effective decision-making process and inversely produced a significant positive impact on developing livestock in Kazakhstan. The study concluded that human capital development plays an important role in promoting the success of farmers' livestock as it helps to navigate strategic decisions that would add value to the enhancement of livestock farming.

This study agreed that when the farmer obtains adequate skills and knowledge, it helps to position their strategic plans in promoting livestock farming development in Kazakhstan. From the limitations of the study, the findings of this study provided a concluding detailed account and empirical evidence of the availability of credits, innovation, and farmer training in livestock farming development, which was significant and positive. In addition, it is expected that the study would support policymakers, organisations, farmers, researchers, and other parties interested in exploring in-depth studies relating to livestock development. It further helps to continuously instil the impact of promoting livestock farming development in Kazakhstan.

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