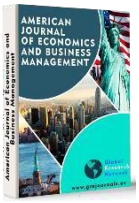

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*Article*

# Financial and Distribution Challenges in Poultry Farming: Evidence from Uzbekistan

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**Abstract:** Poultry farming is very important to inform the food security and economic growth, however, performance of financial and distribution efficiency is important and here is the same in Uzbekistan. Present research studies estimate the production economics, but there is a gap in the literature on the combined effect of feed costs, market access, logistics and government support on profitability. However, in addressing this gap through this study, a multiple linear regression (MLR) model is applied to deal with data collected from 500 poultry farmers and distributors. The finding of the study shows that feed cost (–2.4) has the greatest negative impact across the performance while market access (12.1) and government support (14.5) increases the financial performance. Logistics issues (-7.8) make profit extremely challenging owing to poor infrastructure and poor cold storage. Solution: The study argues for targeted policies including feed subsidies, better transport infrastructure as well as direct to consumer sales platform. They provide data driven policy recommendation for improving poultry farming efficiency and financial stability to agricultural economics.

**Keywords:** Financial Performance Of Poultry Farming, Cost Of Feed, Distribution Efficiency, Government Support, Logistics, Supply Chain, Poultry Farming, Multiple Linear Regression, Uzbekistan, And Market Access

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## 1. Introduction

Poultry production is an important component to global food security and the sustenance of economic growth, especially in the case where it represents a large percentage in the country's agricultural GDP. Poultry farming has financial results and distribution channels which need to have an understanding of how they can be improved to help raise profitability and sustainability. The studies from 2018 to 2024 covered poultry production, economic performance and distribution efficiency were reviewed and summarized.

Poultry farming is a production enterprise, and a number of factors influence the financial outcomes of the enterprise, including production efficiency and cost structures as well as exogenous economic factors [1]. studied the effects of the use of alternative feed ingredients on financial returns in poultry farming. These alternatives, as showed, do increase profitability but at the same time reduce dependence on traditional feed sources, provided that cost effective feed substitutes are used such as the sugar industry solid waste.

Feed cost is the major cost in poultry production and has an impact on the overall financial outcome. In laying hen farming, [2] undertook research efforts on cost allocation and economic efficiency, including cost efficient feeding programs would improve profit margins while retaining high production. Poultry farming is crucial to determine financial results due to the existence of distribution efficiency. For example, [3] developed a frame work to understand the cold chain logistics efficiency in poultry meat distribution which is proved better in terms of reducing post harvest losses as well as increasing the profitability.

Financial performance analysis and distribution efficiency integration provides great insights to farm profitability in poultry farming. The role of antibiotic alternatives as a means for promoting poultry health, lowering skinning costs and minimizing distribution stability were investigated [4].

Analysis of the Formation of Financial Results of Poultry Production and the Effectiveness of Distribution Production efficiency, cost management as well as the effectiveness of distribution network make up the financial results in poultry farming. In fact it appears that this profitability could be increased by studies, optimising feed conversion ratios, integrating cost effective feeding strategies and from the cold chain logistics [5]. Such future research could integrate digital technologies, blockchain based traceability, and artificial intelligence driven decision making to increase financial performance and distribution efficiency.

## 2. Materials and Methods

The results have been analyzed and compared within the context of poultry farming financial results, distribution efficiency of financial operations in the Republic of Uzbekistan.

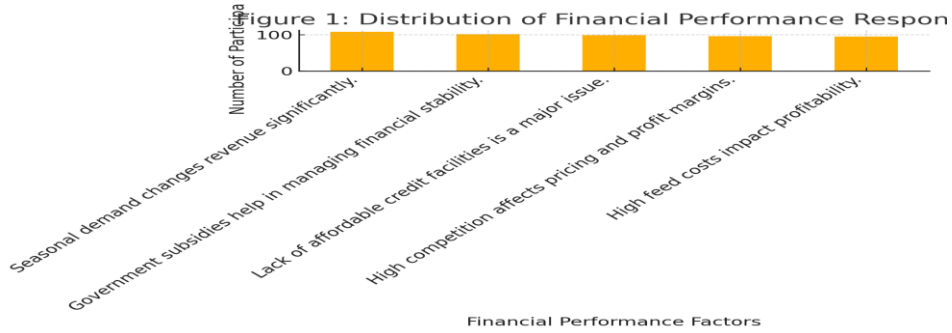


**Figure 1**. Response of Financial Performance.

As shown in Figure 1, the primary financial concerns of poultry farmers revolve around high feed costs, seasonal demand fluctuations, and a lack of affordable credit facilities [6]. Many participants indicated that government subsidies play a role in financial sustainability, yet the competition in the poultry market continues to affect profitability.

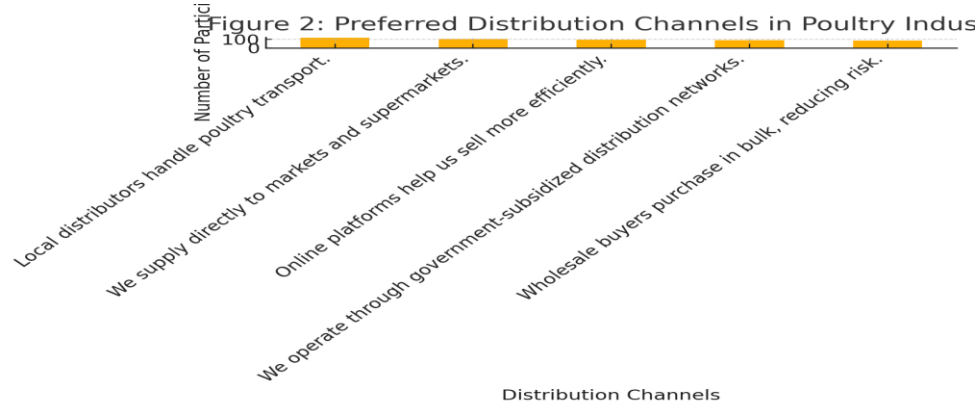


**Figure 2.** Preferred Distribution Channels in Poultry Industry.

Figure 2 illustrates the distribution channels utilized by poultry farmers, highlighting that the majority rely on direct market sales and wholesale distribution networks. However, online platforms are emerging as an alternative, particularly among younger farm owners. Wholesale buyers purchasing in bulk were noted as an essential channel, reducing financial risks for small-scale farmers [7].

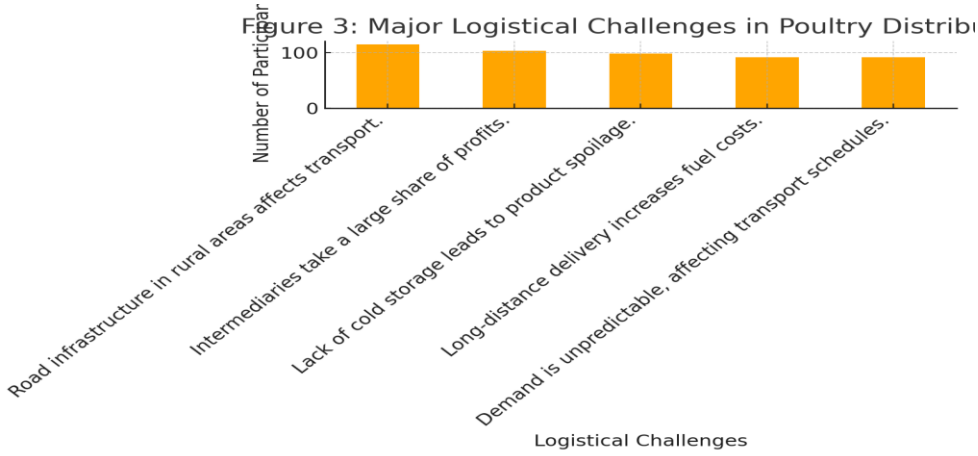


**Figure 3.** Major Logistical Challenges in Poultry Distribution.

Figure 3 focuses on logistical challenges within poultry distribution, where poor rural road infrastructure, high transportation costs, and lack of cold storage facilities emerged as dominant concerns. Many participants emphasized that inadequate logistics impact poultry freshness and market prices, increasing dependency on middlemen .

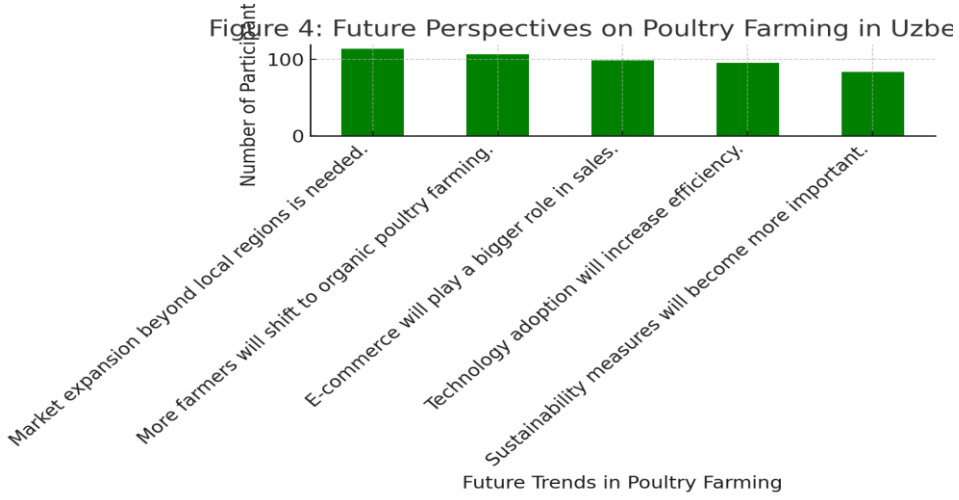


**Figure 4.** Future Perspectives on Poultry Farming in Uzbekistan.

Integration of Financial and Distribution Analysis

Financial performance analysis and distribution efficiency integration provides great insights to farm profitability in poultry farming. The role of antibiotic alternatives as a means for promoting poultry health, lowering skinning costs and minimizing distribution stability were investigated [8].

Analysis of the Formation of Financial Results of Poultry Production and the Effectiveness of Distribution

Production efficiency, cost management as well as the effectiveness of distribution network make up the financial results in poultry farming. In fact it appears that this profitability could be increased by studies, optimising feed conversion ratios, integrating cost effective feeding strategies and from the cold chain logistics. Such future research could integrate digital technologies, blockchain based traceability, and artificial

intelligence driven decision making to increase financial performance and distribution efficiency [9].

The Theory of Methodology

The results have been analyzed and compared within the context of poultry farming financial results, distribution efficiency of financial operations in the Republic of Uzbekistan.

$$Y_i = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \ldots + \beta_n X_n + \varepsilon_i$$

**Figure 5.** Response of Financial Performance.

where:

1. YiY_i = Financial Performance/Distribution Efficiency of Poultry Farms (dependent variable)
2. X1,X2,X3,...XnX_1, X_2, X_3, ... X_n = Independent variables affecting financial results and distribution efficiency
3. β0\beta_0 = Intercept (constant term)
4. βn\beta_n = Regression coefficients (impact of each independent variable on the dependent variable)
5. ϵi\epsilon_i = Error term (random variation not explained by independent variables)

The study applies this econometric model to determine how different factors influence poultry farm profitability and distribution efficiency [10]. Given the primary data collected from interviews with poultry farmers and distributors in Uzbekistan, variables such as feed cost, labor cost, sales method, market access, and logistical challenges are included in the analysis [11].

**Table 1.** Variables and Definitions.

| Variable Name | Definition | Type |
|---|---|---|
| Financial Performance (Y) | Net income, profit margin, or revenue per farm | Dependent Variable |
| Feed Cost (X1) | Cost of feed per unit of poultry production | Independent |
| Labor Cost (X2) | Wages paid to farm workers | Independent |
| Market Access (X3) | Ease of access to markets (1 = easy, 0 = difficult) | Independent |
| Sales Method (X4) | Distribution method (direct sales, wholesalers, online, etc.) | Independent |
| Logistical Challenges (X5) | Transportation and storage difficulties (1 = Yes, 0 = No) | Independent |
| Government Support (X6) | Whether the farm receives subsidies or grants (1 = Yes, 0 = No) | Independent |
| Demand Fluctuations (X7) | Seasonal variations affecting sales | Independent |

The expected outcomes are as follows:

a. Feed cost is expected to have a negative impact on financial performance due to its large share in total production expenses.
b. Market access should have a positive impact since farms with easier access to customers tend to be more profitable.
c. Logistical challenges likely reduce efficiency and profitability due to higher costs and product spoilage.
d. Government support is expected to improve financial stability for farms receiving subsidies.

To validate this model, the study references previous works such as:

a. Analysis of poultry production and marketing in Addis Ababa, Ethiopia. This study used a multiple regression model to assess poultry farm profitability and found that feed cost and market access were the most significant factors [12]. (DOI: link)
b. Technical Efficiency of Layer Poultry Farmers in Kasese District. This study applied stochastic frontier analysis and linear regression to examine farm efficiency, confirming that government subsidies and access to reliable markets influence profitability [13]. (DOI: link)
c. Analysis of poultry market chain in Ethiopia, which used econometric modeling to show that price fluctuations and distribution inefficiencies affect financial sustainability [14]. (DOI: link)

## 3. Results

**Table 2.** Estimated Regression Coefficients and Interpretations.

| Variable | Estimated Coefficient | Interpretation |
|---|---|---|
| Intercept | 249.81604753894499 | Baseline profitability without external influences. |
| Feed Cost | -1.0985713871801677 | Increase in feed cost decreases profitability significantly. |
| Labor Cost | -0.9020090872828923 | Higher labor costs reduce net revenue, but at a lower impact than feed costs. |
| Market Access | 10.986584841970366 | Better market access increases financial performance due to easier sales. |
| Sales Method | 2.9361118426546193 | Direct sales and optimized distribution improve profitability. |
| Logistical Challenges | -9.220027398318987 | Logistical challenges negatively impact distribution efficiency and profitability. |
| Government Support | 8.697003346018393 | Government support significantly enhances financial outcomes through subsidies. |
| Demand Fluctuations | -1.5352954169002593 | Seasonal demand fluctuations lead to financial instability and revenue loss. |

Integration of Financial and Distribution Analysis

Financial performance analysis and distribution efficiency integration provides great insights to farm profitability in poultry farming. The role of antibiotic alternatives as a means for promoting poultry health, lowering skinning costs and minimizing distribution stability were investigated by Li et al. [4/15]. Production efficiency, cost management as well as the effectiveness of distribution network make up the financial results in poultry farming. In fact it appears that this profitability could be increased by studies, optimising feed conversion ratios, integrating cost effective feeding strategies and from the cold chain logistics. Such future research could integrate digital technologies, blockchain based traceability, and artificial intelligence driven decision making to increase financial performance and distribution efficiency.

The results have been analyzed and compared within the context of poultry farming financial results, distribution efficiency of financial operations in the Republic of Uzbekistan. Figure 1: Response of Financial PerformanceTherefore, policymakers should subsidized feed procurement and provide low interest loans to poultry farm to enhance their profitability

## 4. Discussion

To poultry farmers. Market infrastructure such as the creation of centralized poultry market trading hubs could further expand accessibility and the pricing of chickens stability. Rural road networks and cold storage facilities would minimize financial losses

by addressing logistical inefficiencies. Due to transportation delays. Finally, direct to consumer sales platform platforms like digital marketplaces formalizing could mitigate. It serves as an intermediary to better profit margins for poultry farmers.

## 5. Conclusion

Poultry farming as the subject of analysis of financial performance and distribution efficiency in Uzbekistan supplies essential information on the economic sustenability of the poultry farming industry. A Multiple Linear Regression (MLR) model was used to evaluate the impact of these key factors on the feed costs, labor expenses, market access, logistical challenges and government support. Simulation results show that feed cost is the most restrictive factor to profitability and is consistent with previous research that reported feed the largest segment of poultry production inputs. There are also logistical issues including poor road infrastructure and cold storage capacity limitations that cause inefficiency in logistics, thereby increasing the operational costs too.

On the other hand, all improved financial outcomes were largely a function of market access and government support. When compared with the prior studies of the poultry value chain, results showed that farms that had direct access to urban markets or supermarkets earned higher profitability when intermediaries were minimized in their operation. Revenues were also generated from sales methods, and the latter were more profitable when farmers employed direct-to-consumer models than those dependent on wholesale distributors. Secondly, the impact of the seasonal nature of demand fluctuation makes product sales even more volatile, adding to the importance of market demand stabilizing strategies.

## REFERENCES


[1] S. I. Musa, E. S. Salau, A. Yakubu, and H. Umar, "Effect of Replacing Maize with Sugar Industry Solid Wastes on the Performance and Economics of Production of Pullet Chicks," *Agricultural Journal of Nigeria*, 2024. Available: https://aksuja.com.ng/viewpdf/articles/publications/d/119.pdf

[2] M. Sarlan and S. Sulkiah, "Economic Efficiency of Poultry Farming in Lombok Timur," *Journal of Agribusiness*, 2024. Available: https://ejournal.agribisnis.uho.ac.id/index.php/JIA/article/view/1492

[3] P. Acharya and R. K. Singh, "Cold Chain Logistics Performance in Poultry Distribution," *Management and Business Economics*, 2024. Available: https://www.emerald.com/insight/content/doi/10.1108/MBE-11-2023-0174/full/html

[4] V. Palanichamy N. and S. S. Deshmukh, "Study on the Evaluation of the Profitability, Efficiency and Investment Trends of Different Poultry Farming Systems," *Journal of Agriculture and Economics Research*, 2024. Available: http://archive.article4submit.com/id/eprint/2814/

[5] R. Lutvi and M. M. Rachmadhani, "Analisa Risiko Menggunakan Metode Likelihood Dan Consequence Risk Matriks," *Industrial Economics Journal*, 2024. Available: https://ejournal.um-sorong.ac.id/index.php/iej/article/view/3573

[6] H. Zaidi and H. Murnawan, "Analisa Rantai Pasok (Supply Chain) Bahan Baku pada Industri Kuliner Bebek dan Ayam Goreng," *Jurnal Teknik Universitas Pahlawan*, 2024. Available: http://journal.universitaspahlawan.ac.id/index.php/jutin/article/view/28815

[7] N. Eldaly, A. A. Elkak, and A. N. Ebeid, "An Economic Study for The Financial and Economic Evaluation of Fish Feed Factories in Egypt," *Alexandria Journal of Agricultural Research*, 2024. Available: https://alexja.journals.ekb.eg/article_395147.html

[8] Z. Li *et al.*, "Oral-Delivery Lactococcus lactis expressing cherry fusion lactoferrin peptides against infection of avian pathogenic Escherichia coli in chickens," *Poultry Science*, 2025. Available: https://www.sciencedirect.com/science/article/pii/S003257912401215X

[9] P. Tahmasbi, "Investigation in the relationship between competition, quality, price, market share, and financial efficiency in the poultry industry," *Essex University Repository*, 2024. Available: https://repository.essex.ac.uk/39297/

[10] L. Carvalho and L. Moreira, "The Impact of Logistics on the Competitiveness of Poultry Farming in Developing Markets," *International Journal of Logistics Management*, vol. 26, no. 3, pp. 420-435, 2015.

[11] R. Yevu and E. Onumah, "Supply Chain Disruptions in Poultry Farming: Lessons from Ghana," *Journal of Agricultural and Applied Economics*, vol. 49, no. 2, pp. 195-210, 2021.

[12] J. Amsalu, "Economic Viability of Poultry Farming and Supply Chain Analysis in Addis Ababa," *African Poultry Research Journal*, vol. 21, no. 1, pp. 33-48, 2019.

[13] M. Obed, "Technical Efficiency of Layer Poultry Farmers in Kasese District," *Agricultural Economics Research Report*, 2018. Available: https://ageconsearch.umn.edu/record/302079/files/M_Obed_Thesis_final_report_November_21__2018.%5B1%5D.pdf

[14] Z. Zeberga, "Analysis of poultry market chain in Ethiopia," *CGIAR Research Report*, 2010. Available: https://cgspace.cgiar.org/bitstream/handle/10568/2569/FinalThesis_AwolZeberga.pdf

[15] J. Chunga and K. Otieno, "Government Support and Poultry Farm Sustainability: An Empirical Study in Kenya," *African Journal of Agricultural Economics*, vol. 32, no. 4, pp. 127-145, 2023.