Income Analysis of Broiler Farm with Partnership Patterns in Tanjung Putus Village, Padang Tualang District

Khairi Pebriansyah [1] and Purwo Siswoyo[1*]
[1] Department of Animal Science, Faculty of Science and Technology, Panca Budi University, Medan
*Email: Purwoyo@dosen.pancabudi.ac.id

Received 27 April 2024; Received in revised from 25 may 2024 ; Accepted 01 June 2024

Abstract
To meet the high demand for chicken meat, appropriate strategies are needed to ensure that the farming system operates optimally. The common farming system used by farmers for raising broiler chickens is the partnership farming system. This system is a form of collaboration between companies and farmers to provide benefits to both parties. One village that implements this system is Tanjung Putus Village. This study aims to analyze the income from broiler chicken farming with a partnership system in Tanjung Putus Village, Padang Tualang District. The method used is purposive sampling for independent and partnership system businesses. The data analysis methods employed include income analysis, expense analysis, and business efficiency analysis. The study results show that the business efficiency of the partnership farming system has a higher value than the independent system, which is 1.24. The partnership farming system has the potential for higher profitability and lower risk levels.[**INCOME ANALYSIS OF BROILER FARM WITH PARTNERSHIP PATTERNS IN TANJUNG PUTUS VILLAGE, PADANG TUALANG DISTRICT**] ***(J. Math. Nat. Sci., 4(1): 7-12, 2024)***

***Keywords*:**
Income, Analysis, Broiler Farm, Partnership, Profit

Introduction

Broiler chicken farming is one of the agricultural sectors with significant potential to contribute to the national economy. Broiler chickens are a type of chicken specifically bred for meat production in a short period of time. Along with the rising demand for chicken meat in domestic and international markets, this sector continues to experience significant growth. In response to this growing demand, an integrated farming system is needed to ensure that supply and demand are optimally met.

Strategies to meet the high demand for broiler chickens can involve both independent farming systems and partnership farming systems. The independent farming system is a broiler chicken farming operation entirely funded by the farmer. The farmer independently provides day-old chicks (DOC), feed, housing, equipment, labor, livestock production facilities, and markets the chickens in either live or carcass form. The drawback of this system lies in the large amount of capital required to be provided independently, making expansion difficult and marketing challenging on a large scale. Additionally, the high risk of disease and mortality must be borne solely by the independent farmer (Dafitra et al., 2018).

The partnership farming system is a collaboration between entrepreneurs as investors and farmers as implementers in managing broiler chicken farming operations. A commitment to the terms of the partnership agreement between both

parties is crucial to ensuring that the goals of the partnership system are achieved and mutually beneficial. In this partnership system, the capital owner (parent) and independent farmers (partners) work together to produce broiler chickens jointly. This system offers various benefits, particularly for partner farmers who may not have sufficient capital to start an independent business. By partnering with capital owners, partner farmers can access capital, technology, and larger markets (Taluke et al., 2021). This partnership system provides several advantages for farmers, such as access to high-quality chicks, livestock feed, medications, and technical guidance from the partner company. Additionally, this partnership ensures a market for the livestock products, so farmers do not have to worry about marketing their production. However, there are some risks to consider, such as dependence on the partner company and the potential for unfair profit distribution.

One village that applies broiler chicken farming with a partnership system is Tanjung Putus Village, Padang Tualang District. Farmers in this village have chosen the partnership system with the hope of maximizing profits with minimal capital. Most farmers in this village have greatly benefited from this partnership system, but they are not yet able to analyze the potential profits of broiler chicken farming under the partnership system.

Analyzing broiler chicken farming businesses using the partnership system is essential to understand its impact on farmers' welfare. Social factors such as education, experience, and skills of farmers, as well as economic factors like income, capital, and access to resources, all play a role in determining the success of the farming business (Hanum & Safuridar, 2018).

Based on the description above, the partnership farming system has advantages in terms of accelerating development and marketing. Therefore, this study aims to analyze the income from broiler chicken farming with a partnership system in Tanjung Putus Village, Padang Tualang District.

Materials and Methods

Research Time and Location

This research was conducted in Tanjung Putus Village, Padang Tualang District, over a period of 4 months, from January 2024 to April 2024.

Sample Selection Method

The sampling was carried out using a purposive survey method on 2 respondents for each broiler chicken farming business—both the independent system and the partnership system. The samples were chosen from farmers who have been continuously engaged in farming to increase the validity of the information and data regarding the business.

Types and Sources of Data

The types of data used in this research are primary and secondary data. Primary data were obtained through direct observation and interviews with the farmers. The interview questionnaire for the farmers included questions on respondent age, education, farming experience, costs, production, and other aspects related to the research. Secondary data were obtained from relevant agencies, including data on population, broiler chicken production, the profile of the

research area, and other necessary information to support the research.

Data Analysis

Income Analysis To determine the amount of income (profit) the farmers earn from the broiler chicken business, the following formula is used (Soekartawi, 2006):

$$PD=TR-TC$$

PD: Total Income
TR: Total Revenue
TC: Total Expenses

Business Efficiency Analysis (R/C)

The efficiency (feasibility) of the broiler chicken farming business is calculated using the following formula:

$$R/C = TR/TC$$

R/C: Business Efficiency Analysis
TR: Total Revenue
TC: Total Cost

The criteria commonly used to evaluate a broiler chicken farming business are:

- R/C > 1: The business is efficient (profitable)
- R/C < 1: The business is inefficient (loss)
- R/C = 1: The business is at the breakeven point (break-even)

Results and Discussion

The research results regarding the income of broiler chicken farmers using both independent and partnership farming systems show differences in profit and efficiency values. This is due to several factors, including population size, production costs, and production expenses (Table 1).

Table 1. Income and Efficiency Level of Broiler Chicken Farming with Independent and Partnership Systems in Tanjung Putus Village, Padang Tualang District

No	Animal Husbandry System	Total Revenue (TR)	Total Expenditure (TC)	Profit	Business Efficiency
1	Independent	Rp. 18,700,000	Rp. 18,135,400	Rp. 564,600	1.03
2	Partnership	Rp. 187,000,000	Rp. 173,154,000	Rp. 13,846,000	1.08

Table 1 highlights a substantial difference in profit levels between independent and partnership farming systems. The independent farming system yields a net profit of Rp. 564,600, whereas the partnership system brings in Rp. 13,846,000. This disparity is primarily due to the significant difference in the number of broiler chickens raised. A larger broiler chicken population has the potential to generate higher profits. The number of livestock raised directly affects the income farmers earn; the more chickens they raise, the greater their income, although this also results in higher production costs (Utomo, 2015).

The income difference at each business scale is substantial, indicating that greater benefits and profits can be achieved with larger-scale operations (Gusasi & Saade, 2006). Although the profit levels vary significantly, both the independent and partnership livestock systems show a business efficiency value of >1, signifying that these ventures are feasible for development.

Similar research on broiler chicken businesses operating with independent and partnership systems in Central Kuantan District found efficiency values of 1.02 for the independent system and 1.07 for the partnership system (Dafitra et al., 2018).

Total Revenue (TR)

The total revenue of the broiler chicken farming business in Tanjung Lepas Village, Padang Tualang District is detailed in Table 2.

Table 2. Total revenue from broiler chicken farming in Tanjung Putus Village, Padang Tualang District

No	Farming System	Business Scale (heads)	Production (Kg)	Price/Kg (Rp)	Revenue (Rp)
1	Independent	500	850	22,000	18,700,000
2	Partnership	5000	8,500	22,000	187,000,000

According to Table 2, the total revenue generated from broiler chicken farming using the independent system is IDR 18,700,000 from 500 chickens raised, while the partnership system yields Rp 187,000,000 from 5,000 chickens. The partnership system shows a significant advantage in total production sold. Typically, broiler chickens are ready for market at 5-6 weeks of age, weighing between 1.3 and 1.7 kg.

Total Cost (TC)

Total cost represent the overall costs incurred by broiler chicken farmers throughout the production process. These costs can be categorized into fixed and variable expenses. Fixed costs include depreciation of cages and equipment, as well as land and building taxes. In contrast, variable costs encompass expenses for DOC chicks, feed, vaccines and medicines, electricity, and labor. A summary of the total expenditures for this study can be found in Table 3.

Table 3. Total Broiler Chicken Farming Expenditures in Tanjung Putus Village, Padang Tualang District

No	Farming System	Fixed Costs (Rp)	Variable Costs (Rp)	Total cost (Rp)
1	Independent	130,400	18,005,000	18,135,400
2	Partnership	1,304,000	171,850,000	173,154,000

According to Table 3, variable costs (non-fixed costs) represent the largest portion of expenses in both livestock system patterns. In the independent system, variable costs amount to Rp. 18,005,000, which is approximately 99% of the total expenses, while fixed costs account for only 1% or Rp. 130,400. In the partnership system, variable costs reach Rp. 173,154,000, also around 99% of total expenses, with the remainder being fixed costs.

The most significant variable cost is attributed to feed, which constitutes 60-70% of total expenses during maintenance. Supporting this, other research indicates that maintaining 5,000 chickens can incur feed costs of approximately 60% or IDR 108,300,000 per period (Nauratudini, 2022). Furthermore, a study by Bahari et al. (2012) noted that for a rearing scale exceeding 2,000 heads, feed costs represented the largest production expense, totaling IDR 35,456,471 per period, with feed costs making up 60-70% of the overall livestock business expenses (Bahari et al., 2012).

Business Efficiency

The efficiency value of the broiler chicken farming business in Tanjung Lepas Village, Padang Tualang District, can be seen in Table 4.

Table 4. Efficiency of broiler chicken farming in Tanjung Lepas Village, Padang Tualang District

No	Farming System	Total Revenue (IDR)	Total Cost (IDR)	Business Efficiency
1	Independent	18,700,000	18,135,400	1.03
2	Partnership	187,000,000	173,154,000	1.08

Table 4 shows that the business efficiency value for the partnership farming system is higher than that of the independent farming system, with values of 1.08 and 1.03, respectively. This finding is corroborated by research conducted in Nanngung District, which indicated that no farmers incurred losses, with the highest business efficiency value recorded at 1.158 (Illahi et al., 2019).

Conclusion

The analysis of livestock business efficiency using a partnership model in Tanjung Putus Village, Padang Tualang District, yields a value of 1.24, indicating that the business is efficient and viable for further development. A livestock system based on partnership has the potential for higher profits and lower risk levels.

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