

FEASIBILITY ANALYSIS OF A LIVESTOCK BUSINESS (CASE STUDY AT A VILLAGE-OWNED ENTERPRISE)

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Abstract:

This study aims to analyze the feasibility of a livestock business managed by a Village-Owned Enterprise (BUMDes) located in Denpasar City, Bali, as part of a village food security program. This study uses a quantitative descriptive approach with a focus on financial analysis. The data used consists of primary data obtained through interviews with BUMDes managers and livestock farmers, as well as secondary data in the form of documents on financial records and activity reports. Analysis techniques include calculating production costs, revenue, operating profit, and livestock population growth over several harvest periods. The results show that the livestock business provides positive profits in each harvest period with an increasing trend in livestock numbers and operating profits from year to year. This research only analyzed the feasibility study of livestock farming based on financial aspects. Thus, the livestock business managed by BUMDes is declared financially feasible and has the potential to support food security and improve the village economy.

Keywords: Feasibility Study, Village-Owned Enterprise, Pig Farming, Food Security, Financial Analysis.

INTRODUCTION

With the elevation of Denpasar City's status to an Administrative City, and the city's rapid population growth due to births and the arrival of new residents, the government deems it necessary to effectively regulate government administration to ensure the smooth running of the government. In this regard, preparations are underway to establish villages. These preparations are in accordance with the Decree of the Regent, Head of the Badung Regency, dated December 1, 1979, No. 167/Pem.15/166/79, concerning the expansion or formation of villages within the Denpasar Administrative City area.

The government, through Decree of the Minister of Villages and Disadvantaged Regions No. 3 of 2025, regulates village food security policies. The regulation strengthens the Regulation of the Minister of Villages and Development of Disadvantaged Regions Number 2 of 2024 concerning Operational Instructions on the Focus of Village Fund Use in 2025 that the focus of Village Fund use for the Food Security program is at least 20% (twenty percent) involving Village-Owned Enterprises (BUMDes), joint BUMDes or community economic institutions in the Village.

The Ministry of Villages and Development of Disadvantaged Regions encourages the use of Village Funds to achieve food security, thereby achieving food self-sufficiency in all villages across Indonesia. Food security policy programs are implemented in an inclusive, accountable, collaborative, and sustainable manner, aligned with the village's themes, potential, and/or superior products, and under its authority. It includes the development of superior village products, both plant-based (such as corn, melon, rice, chilies, tomatoes, sago, and sweet potatoes) and animal-based (such as tilapia, laying hens, and sheep). The policy of using Village Funds for food security also encourages increased community income, employment, and local economic activity. This government expectation is supported by research (Suranjaya et al., 2017), which states that



productive businesses can support family economies. The research was conducted in Puhu Village, with a profile of small-scale livestock farmers classified as productive-age and well-motivated with a secondary education.

Furthermore, in the Decree of the Minister of Villages and Development of Disadvantaged Regions of the Republic of Indonesia Number 3 of 2025 concerning "Guidelines for the Use of Village Funds for Food Security in Supporting Food Self-Sufficiency" it is stated that the use of Village Funds for Food Security in supporting Food Self-Sufficiency aims to: (1) make BUMDes, joint BUMDes, and other community economic institutions in the Village as implementers of food security programs and activities; (2) ensure that Village Fund expenditures are at least 20% (twenty percent) as Village capital participation to BUMDes, joint BUMDes, or investment for other community economic institutions in the Village for food security decided in Village deliberations and/or inter-Village deliberations; (3) support the empowerment of business actors in the food sector such as farmers, livestock breeders, fish farmers, fishermen, and other food sector business actors in the Village and optimize the Village's economic potential in food security programs and activities; (4) strengthen the role of the Central Government, Provincial Government, Regency/City Government to provide support, facilitation, coaching and mentoring, functional services such as technical guidance, counseling for the implementation of food security programs and activities.

The purpose of this study is to analyze the financial feasibility of livestock farming at a village-owned enterprise (BUMDes) in Denpasar City, Bali. The results are expected to inform the Village Head's decision-making process regarding whether to accept or reject a livestock farming project proposed by the BUMDes Director.

METHODS

The data required for this study were collected using: Interviews with the BUMDes Director, the Village Head and his staff, and livestock farmers residing in the village; and Documentation, conducted by collecting secondary data from the BUMDes Director.

The types of data collected and required for this study, based on their sources, include: Primary data collected by the researcher through interviews, such as the initial investment amount to be invested by the BUMDes, the proposed business model to be implemented, the livestock farmers to be involved in the business, and other data required for this feasibility study; and Secondary data collected by the researcher through documentation, such as the village profile, production costs charged as cost of production, and the selling price after deductions.

The types of data collected and required in this research, based on their nature, include: Qualitative data, such as village profiles, cage rental systems, and livestock husbandry systems; Quantitative data, such as production costs, selling prices, village population, and the amount of investment to be made at the beginning of the year.

Once the data is collected, the available data, deemed sufficient, will be analyzed using descriptive analysis. Before formulating conclusions from the research results, calculations of production costs, profit/loss, proceeds, and the Internal Rate of Return (IRR) will be performed to support the research conclusions.

RESULTS AND DISCUSSION

Based on data collected through interviews and observations, the types of data collected include: the amount of Village Funds in 2025, which is Rp. 1,907,880,000.00. Of this amount, Rp. 544,633,000.00, or 29%, will be invested in livestock businesses. This amount has exceeded the government's requirements in the Decree of the Minister of Villages and Disadvantaged Regions



No. 3 of 2025, at least 20% of the Village Fund, used as an investment in food security. In the BUMDes Director's plan, funds of Rp. 544,633,000.00 will be allocated for the purchase of 110 seeds. The cages needed to raise livestock will be rented from local breeders at a rental price of Rp. 15,000 per head/month. Maintenance costs of Rp. 150,000.00 per head/month. spending food in the form of starter feed (551) 1 sack at a price of Rp. 580,000.00/sack. The starter feed (551) is provided for the first month. Meanwhile, the growing feed (552) is priced at Rp. 490,000.00 per sack and will be provided from the second to the fifth month. Livestock will be vaccinated in the first month of maintenance at a vaccine price of Rp. 50,000.00 per head. To maintain the health and growth of livestock, farmers fill out a control board in each pen. To obtain maximum results and ensure the business is sustainable, the Village-Owned Enterprise (BUMDes) will provide training to farmers at a cost adjusted to available funds.

After the data is collected, an analysis is carried out by making the following calculations: (1) It can be explained that in the first harvest period of the first year, a business profit of Rp. 26,117,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 17, so that in the second harvest period of the first year, 127 will be kept; (2) In the second harvest period of the first year, a business profit of Rp. 45,745,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 30, so that in the second harvest period of the first year, 157 will be kept; (3) In the third harvest period of the second year, a business profit of Rp. 36,275,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 24, so that in the fourth harvest period of the second year, 181 will be kept; (4) In the fourth harvest period of the second year, an operating profit of Rp. 54,325,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 36, so that in the second harvest period of the first year, 217 will be kept; (5) In the fifth harvest period of the third year, an operating profit of Rp. 66,275,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 44, so that in the sixth harvest period of the third year, 261 will be kept; (6) In the sixth harvest period of the third year, an operating profit of Rp. 80,075,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 53, so that in the seventh harvest period of the fourth year, 314 will be kept; (7) In the seventh harvest period of the fourth year, an operating profit of Rp. 86,550,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 58, so that in the eighth harvest period of the fifth year, 372 will be kept; (8) In the eighth harvest period of the fourth year, an operating profit of Rp. 115,650,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 77, so that in the ninth harvest period of the fifth year, 449 will be kept; (9) In the ninth harvest period of the fifth year, an operating profit of Rp. 134,675,000.00. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 90, so that in the tenth harvest period in the fifth year, 539 will be kept. (10) In the tenth harvest period in the fifth year, an operating profit of Rp. 168,975,000.00 is obtained. Assuming that all the profits obtained are used to buy seeds, then the additional seeds that can be kept in the next harvest are 113, so that in the tenth harvest period in the fifth year, 652 will be kept.

The next step is to determine whether the livestock business project planned to be implemented by BUMDes is feasible, as follows:



Table 1. Proceed Calculation

Year	Investment Amount	Total Profit	Total Proceed
1	1.158.888.000,00	71.862.000,00	71.862.000,00
2	1.670.400.000,00	90.600.000,00	162.462.000,00
3	2.360.150.000,00	146.350.000,00	308.812.000,00
4	3.385.800.000,00	202.200.000,00	511.012.000,00
5	4.875.150.000,00	303.600.000,00	814.612.000,00
	13.450.388.000,00	814.612.000,00	1.868.760.000,00
Average	1.345.038.800,00	162.922.400,00	
Conclusion			
Investment has been returned in the 5th year in April			
Proceeds of the fifth year			814.612.000,00
Initial Investment			544.633.000,00
			269.979.000,00

Source: Processed data (2025)

Based on Table 1, it can be explained that the initial investment of Rp. 544,633,000.00 is declared feasible, and the "Livestock Business" project can be continued because the fifth year's proceeds of Rp. 814,812,000.00 has exceeded the initial investment amount invested by Dauh Puri Kauh Village, North Denpasar District, Denpasar City, Bali Province. The reason is that the Proceeds up to the fifth year exceed the initial investment value (Proceed Outlays).

Table 2. Internal Rate of Return (IRR) Calculation

Year	Proceed	DF	PV of Proceed
1	71.862.000,00	0,892857143	64.162.500,00
2	162.462.000,00	0,797193878	129.513.711,73
3	308.812.000,00	0,657516232	203.048.902,77
4	511.012.000,00	0,635518078	324.757.364,28
5	814.612.000,00	0,567426856	462.232.725,79
Present value off proceed			1.183.715.204,58
Present value of outlays			1.158.888.000,00
Positive			24.827.204,58
Assumptions			
Credit interest 12%/year			
Result: The project can be continued			
Year	Proceed	DF	PV of Proceed
1	71.862.000,00	0,869565217	62.488.695,65
2	162.462.000,00	0,756143667	122.844.612,48
3	308.812.000,00	0,657516232	203.048.902,77
4	511.012.000,00	0,571753246	292.172.769,54
5	814.612.000,00	0,497176735	405.006.134,69
Present value off proceed			1.085.561.115,13
Present value of outlays			1.158.888.000,00
Positive			(73.326.884,87)
Assumptions			
Credit interest 15%/year			
Result: Project should not be continued			

Source: Processed data (2025)



Based on the calculation of Net Present Value (NPV) or Internal Rate of Return (IRR) as in Figure 2, it can be concluded that the "Livestock Business" Investment project planned to be run by BUMDes Sapta Madiri Dauh Puri Kaja is feasible to be continued because the Present Value off Proceed exceeds the Present Value off Outlays by Rp. 24,827,204.58, assuming a cost of capital of 12%. Conversely, the project is not feasible to run if the cost of capital is 15%.

CONCLUSION

Based on the results of the analysis carried out, it can be concluded that the "Livestock Business" Investment project planned to be run by BUMDes Sapta Madiri Dauh Puri Kaja is feasible to be continued for the following reasons: 1) The investment Proceed Value has been returned in the fifth year. 2) The Present Value off Proceed is positive, which exceeds the Present Value of Outlays of Rp. 24,827,204.58, assuming a cost of capital of 12%. On the other hand, the project is not feasible to run if the cost of capital exceeds or is 15%. Based on these conclusions, the following recommendations can be made to BUMDes: (1) It is better to reinvest the profits obtained in the next investment, so that the livestock business being run will continue to grow and be sustainable. The development of this livestock business can support the Sustainable Development Group (SDG) which has been launched both at the national and international levels; (2) It is necessary to carry out regular monitoring or control for livestock growth, so that it can be identified and taken early action if the livestock experiences health problems, so that the livestock can grow well and can be sold at a more competitive price; (3) It is necessary to take into account the fair distribution of profits between BUMDes, the Village and the livestock farmers so that cooperation can be established well and sustainably; (4) To prevent undesirable things from happening, a cooperation agreement should be made witnessed by a notary between BUMDes and the livestock farmers so that cooperation can continue safely, peacefully and mutually beneficially; (5) For the security of business capital, with a sufficient amount or nominal amount of material originating from village funds, BUMDes should implement adequate risk management, such as preparing sufficient pens to accommodate the increase in production capacity from year to year. If the livestock business is less promising, the BUMDes Director needs to prepare another business plan, which can be developed in Dauh Puri Kauh Village according to the needs of the market or the village community in particular, and the Denpasar City community in general. It is necessary to develop online product marketing to reach a wider market, so that marketing costs become more efficient. (6) For further research, it is necessary to examine other aspects, such as market, technical, management, legal, and environmental aspects that can influence the sustainability of the livestock business.

This research only analyzed the feasibility study of livestock farming based on financial aspects. Market, technical, management, legal, and environmental aspects are also very important to examine. Therefore, further research needs to examine these aspects.

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