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Business Feasibility Analysis of Laying Duck Breeders in Pesurungan Lor, Margadana District, Tegal City, Central Java, Indonesia

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***Abstract*—** **The purpose of this research is to obtain a decision whether a business is feasible or not to be developed. This study uses a quantitative descriptive method with a case study on a laying duck breeder in Pesurungan Lor Village, Margadana District, Tegal City. In this study, a good study was carried out through the concept of a business feasibility study from the financial aspect. Based on the results of the calculations used in determining whether or not an investment is feasible from a financial aspect, the results obtained by using data analysis method Break Even Point (BEP) the price of IDR 1,592 per item while the Break Even Point (BEP) Volume obtained a value of 78.215 eggs. Based on the R/C Ratio method, a value of 1.2062727 was obtained, while the B/C Ratio method obtained a value of 0.1911 or 19.11%. This means that the laying duck breeder business of Mrs. Ropiko Pesurungan Lor Village, Tegal City is said to be feasible to be developed and feasible to invest in this field.**

***Keywords—*** ***business feasibility, financial aspects, laying duck breeders***

1. INTRODUCTION

Based on official data from the Ministry of Cooperatives and SMEs of the Republic of Indonesia, updated on December 12, 2021, it is explained that SMEs in Indonesia are 65,465,497, with a contribution to Gross Domestic Product of 60.51% or IDR 9,580.76 trillion. MSMEs can absorb 96.92% of the total workforce and can collect 60.03% of the total investment in Indonesia.[1] Therefore, a mature strategy is needed to develop SMEs so that SMEs can become the foundation of the economy and can survive in difficult times. One of the steps that need to be taken in difficult times like today is to cultivate and develop a business that can avoid the risk of loss or bankruptcy.

To develop an MSME, investment is needed to increase capital. However, the capital to be invested is expected to be analyzed first whether the invested capital can provide opportunities in the development of a business. Financial analysis is needed to see whether the business that will be run will be able to provide benefits or not. In other words, the business to be carried out is feasible or not from an economic point of view.[2]

The business feasibility study is a research on a business plan that not only analyzes whether it is feasible or not for a business to be built but also when it is operated routinely to achieve maximum profit for an indefinite period.[3] Further explained by Susilowati (2018), Business Feasibility Analysis is an activity used to assess whether the business carried out has benefited so that it can avoid risks in the future.[4] In other words Business Feasibility Analysis is an analysis to find out whether or not a business will be carried out or an ongoing business. The Business Feasibility Study is used as a basis for making decisions before investing. By conducting a business feasibility study, investors can find out whether an investment is feasible or not. A business feasibility study can provide consideration for investors whether an investment will be rejected or accepted. By conducting a business feasibility study, Micro, Small, and Medium Enterprises (MSMEs) are expected to be able to grow and develop and the obstacles that may be faced can be minimized.

There are several objectives to be achieved from the implementation of a Business Feasibility Study, among others: avoiding losses or bankruptcy, facilitating work implementation, facilitating company planning, facilitating supervision, and facilitating control processes. This business feasibility study has a very large role in the success and survival of a business. It was further explained that there are at least four interested parties, namely investors, MSMEs, the community, and the government.[5]

The Indonesian Central Statistics Agency (BPS)[6] noted that poultry farming, especially laying ducks, can be found in every province in Indonesia. According to unsurtani.com, it is noted that the most famous type of laying duck is the duck or duck Tegal. The business of laying ducks is a business that is widely cultivated by the community as an alternative source of income in the village of Pesurungan Lor, Tegal City. Duck farming in Tegal City plays an important role in supporting the economy, especially in Tegal City. This is because duck eggs are a local product typical of the City of Tegal and its surroundings as local wisdom that needs to be empowered. However, the current pandemic condition has made the laying duck farming business experience ups and downs. For laying duck livestock entrepreneurs need to know whether the efforts made so far can be said to be feasible or not to be developed so that laying duck entrepreneurs do not experience losses. On the other hand, investors also need to understand whether a business is worth investing in or not. Therefore, both laying duck farmers and potential investors need to conduct a business analysis study.

The laying duck farming business managed by Mrs. Ropiko is one of the duck breeding businesses which is used as the main income. Mrs. Ropiko is the wife of a member of the KTTI (Duck Farmers Group) "Berkah Abadi" located in Pesurungan Lor Village, Margadana District, Tegal City. It was initiated in 1990 or 31 years ago. After her husband, Mrs. Ropiko named Mr. Carmadi (deceased) died, finally Mrs. Ropiko managed her duck farming business alone. Currently, Mrs. Ropiko has 250 laying ducks, and Mrs. Ropiko wants her business to be developed by increasing the number of laying ducks. For investors, the government, banks, as well as breeders themselves, it is important to know whether the business is feasible or not to be developed or to invest in the duck farming business.

Based on the description above, the researchers took the title Business Feasibility Analysis for Laying Duck Breeders in Pesurungan Lor, Margadana District, Tegal City, Central Java.

II. RESEARCH METHODS

This research uses descriptive qualitative and quantitative methods with a case study approach. According to [7] explains that research with case studies focuses on the specification of cases in an event that includes individuals, cultural groups, or a portrait of life. Based on the explanation above, it can be stated that a case study is an exploration of a case from time to time through in-depth data collection and involves various sources of information. Case studies are tied to a time, place, phenomenon, and activity or individual. Data collection techniques in this study use interviews, documentation, and literature study. Qualitative data includes data on the results of interviews and literature studies, while quantitative data in the form of data on the amount of income, total costs, selling prices, profits, or losses experienced by the object of the case study, in this case, is a laying duck breeder entrepreneur belonging to Mrs. Ropiko in Pesurungan Lor, Margadana District, Tegal City, Central Java, Indonesia.

Analysis of Aspects in Business Feasibility Analysis [8], among others as follows:

a. Market and Marketing Aspects, discussing segmentation and target markets, the number of requests and offers for products, product quality and specifications, pricing methods, and promotions.

b. Operational and technical aspects, discussing product descriptions, location determination, and facility layout.

c. Human Resources and Juridical Aspects, discussing organizational structure, job descriptions, compensation systems, employee development programs, and Management Information Systems (MIS).

d. Environmental Aspect, discusses the legal entity of the organization and the types of permits required.

e. Financial Aspect, perform data analysis using R/C ratio, B/C Ratio, BEP (Break-Even Point) methods. According to [9] explains that the most well-known and accountable criteria are to use the R/C ratio and B/C Ratio methods.

The following is a formula to determine whether a business is feasible or not as follows:

1. R/C Ratio (Revenue Cost Ratio)

According to [10] explained the formula R/C Ratio

R/C Ratio= Total Revenue ......................................... . ( 1 )

Total cost

Criteria:

If the R/C Ratio is > 1 then the business is said to be feasible.

If the R/C Ratio is < 1 then the business is said to be unfeasible.

2. B/C Ratio

According to [11] explained the formula B/C Ratio

B/C Ratio = Total Profit .......................................... ..... ( 2 )

Total cost

Criteria:

If the B/C Ratio is > 1 then the business is said to be feasible.

If the B/C Ratio is < 1, the business is said to be unfeasible.

3. BEP (Break Even Point)

According to [11] explained the BEP (Break Even Point) formula

1. BEP Price

= Total Production Cost (TC)....................... ( 3 )

Total Production (Q)

1. BEP Volume

= Total Production Cost (TC)....................... ( 4 )

Average Selling Price (Q)

III. RESULTS AND DISCUSSIONS

1. *Result*

The duck or laying duck farming business owned by a resident of Pesurungan Lor Village, Margadana District, Tegal City, named Mrs. Ropiko, is a laying duck farming business that is still very simple both in terms of cages and management techniques. The location of this laying duck business is located in Pesurungan Lor Village, RT 02 RW III, Margadana District, Tegal City. This business is still in the form of a sole proprietorship. This business was initiated by Mrs. Ropiko and her husband in 1990. Before Mrs. Ropiko's husband died, Mr. Carmadi was a member of the KTTI (Duck Farmers Group) “Berkah Abadi”, Pesurungan Lor Village. After her husband died, finally Mrs. Ropiko managed her duck farming business alone. Currently Mrs. Ropiko has 250 laying ducks, and Mrs. Ropiko wants her business to be expanded by increasing the number of laying ducks.

Details of the funds obtained in establishing the laying duck farming business of Mrs. Ropiko are as follows:

Table 1 Working capital details

|  |  |  |
| --- | --- | --- |
| No | Business Capital Details | |
| 1 | Investment Capital | IDR 38,040,000 |
| 2 | Working Capital | IDR 126,900,000 |
| Total | | IDR 164.940.000 |

Source : data processed 2021

Based on the table shows that the details of the capital fund for laying duck farming by Mrs. Ropiko are IDR 164.940.000. Where the source of business capital comes from 100% own capital of IDR 164.940.000. Investment capital of IDR 38,040,000 comes from the following details:

Table 2 Details of Investment Capital

|  |  |  |
| --- | --- | --- |
| No | Information | Amount (IDR) |
| 1 | Cage with an economic life of 5 years | 25.000.000 |
| 2 | Equipment | 540.000 |
| 3 | Ducks (250 heads x @ IDR 50,000) | 12.500.000 |
|  | Total | 38.040.000 |

Source : data processed 2021

Working capital of IDR 126,900,000 comes from the following details:

Table 3 Details of Working Capital

|  |  |  |  |
| --- | --- | --- | --- |
| No | Feed | per bulan (IDR) | 18 bulan (IDR) |
| 1 | bran:30 kg x @ 4.000x30 hari | 3,600,000 | 64,800,000 |
| 2 | aking rice:15kgx@3.000x30 hari | 1,350,000 | 24,300,000 |
| 3 | Pirik fish:70.000x30 hari | 2,100,000 | 37,800,000 |
| Total | | | 126,900,000 |

Source : data processed 2021

1. *Discussions*

The discussion in this research is about the aspects of business feasibility which consist of:

1. Legal Aspect

Mrs. Ropiko's laying duck business is in the form of an individual business, but based on interviews with the owner, the established business does not yet have a legal entity according to legal regulations in Indonesia. In this legal aspect, it is necessary to evaluate the business for business owners. The existence of a valid legal form will be very useful for the survival of the business in the future. In addition, with the existence of a valid legal form, it will be able to convince creditors and investors more than the business established does not deviate from the applicable regulations.

2. Market and Marketing Aspects

The location of the laying duck farming business of Mrs. Ropiko is in Pesurungan Lor Village, Margadana District, Tegal City. The production results from Mrs. Ropiko's laying duck farming business will be taken by the collectors who come. In determining the market position, Mrs. Ropiko's laying duck farming business observes how business actors deal with competitors in similar businesses in Pesurungan Lor Village, Margadana District, Tegal City, and outside Tegal City. This means that with the presence of competitors, the positioning of Mrs. Ropiko's laying duck farm can be determined by competitive analysis through a product marketing strategy, namely the 4 Ps (Product, Price, Place, Promotion).

3. Technical/Operational Aspect

Based on direct observation, the business environment is located in a similar business area, namely laying duck farms, which means the location is close to the Tegal City terminal, the business location is close to raw materials such as laying duck seeds, feed, vitamins, drinking water and equipment supporting the business which is easy to obtain, especially feed and vitamin. Regarding transportation, do not use private transportation but duck eggs are taken by collectors.

In discussing the production area of ​​the business, it will be related to how much area is sometimes desired in accommodating the number of ducks that are ready to be productive. At Mrs. Ropiko's laying duck farm, the number of ducks raised is about 250. When viewed from the number of ducks in the laying duck business, Mrs. Ropiko is included in the micro category. Based on the results of interviews with researchers regarding the place or land used for laying ducks, it can be said that it is not wide enough. The size of the cage to accommodate 250 laying ducks is 16 m x 5 m = 80 cm2.

In discussing the selection of technology in laying duck farming business. The type sometimes built on Mrs. Ropiko's laying duck farming business is a cage made of glugu wood and a pellet floor. The supporting equipment for the cage includes drinking and drinking utensils consisting of water drums, water pumps, water pipes or water hoses, and feed containers. The type of laying duck raised by Ropiko's mother is the Pangon duck type, meaning the type of duck that has been cooked and is ready for eggs. This type of egg-ready duck is about 6-12 months old. Regarding the purchase price of this ready-to-egg duck, it is approximately IDR 50,000. The type of feed for laying ducks consists of a mixture of bran or bran, aking rice, and pirik fish. Where based on an interview with the owner of the duck farming business, Mrs. Ropiko explained that every day the need for feed for 250 ducks has a ratio of 30 kg of bran or bran ( @ IDR 4,000 per kilo ); 15 kg of aking rice (@ IDR 3,000 per kg) and one (1) basket of pirik fish or 30 kg (price per basket IDR 30,000,-) with the cost of grinding per basket IDR 3,000.

4. Management/Organizational Aspect

In the management aspect, the things that will be discussed are project development management and human resource management. At the beginning of business development, the business development was led and supervised directly by the owner and the number of workers used was about 4 people in completing the construction of physical facilities in the form of cage construction and other supports to support the establishment of a laying duck farming business. In Mrs. Ropiko's laying duck farming business, the management of human resources is quite simple.

5. Economic and Social Aspects

On the economic and social aspects, the economic and social aspects will be discussed. The development of the laying duck farm built by Mrs. Ropiko has shown a positive impact from an economic perspective, such as an increase in household income, an increase in worker income, on the social aspect, with the existence of a laying duck farming business by Mrs. Ropiko, the real impact from a social point of view is that the establishment of the business creates field jobs and create jobs. In terms of negative social impact, the establishment of the laying duck farming business, Mrs. Ropiko, has had a rather unfavorable impact on the surrounding community. This is indicated by the outbreak of flies and the smell of sewage waste from the laying duck farm.

6. Aspects of environmental impact

In the discussion of environmental impact aspects, we will study how the effect of laying duck farming business on the environment. The analysis carried out was limited to guessing through direct observation in the location of the laying duck farm business. Mrs. Ropiko's laying duck farming business produces waste, namely duck manure. The sewage itself can cause environmental pollution by affecting air quality by causing a pungent odor in the environment around the location of the farm business. Thus, efforts should be made to minimize the impact of environmental pollution caused by these farms.

7. Financial Aspect

In the financial aspect of the investment cost of the laying duck farming business, Mrs. Ropiko, which was spent IDR 38,040,000 to facilitate investment from the business being run, she should add a working capital of IDR 126,900,000. 250 tails, then the calculation can be done by calculating the cost of investment capital and working capital costs. Details of Earning After Tax (EAT) for laying duck farming by Mrs. Ropikoh of Mrs. Ropiko are as follows:

Table 4 Earning After Tax (EAT) for laying duck farming by Mrs. Ropiko

|  |  |  |  |
| --- | --- | --- | --- |
| **Calculation EAT per semester**  (in IDR) | | | |
| **Description** | **I**  **Jan - Jun 2020** | **II**  **Jul - Dec 2020** | **III**  **Jan - Jun 2021** |
| **Income** | 58,770,000 | 60,150,000 | 58,770,000 |
| **Cost** | 57,435,000 | 44,935,000 | 44,935,000 |
| **Earning  Before Tax** | 1,335,000 | 12,965,000 | 14,735,000 |
| **Tax** 0.5% Turnover | 294,000 | 290,000 | 298,000 |
| **Earning  After Tax** | 1,041,000 | 12,676,000 | 14,437,000 |

Source : data processed 2021

Based on the table above, it can be seen that the total amount of Earning After Tax (EAT) or profit after tax is IDR 28,153,000

The discussion of the analysis used based on the financial aspect in the case of the laying duck farming business, Mrs. Ropiko, Pesurungan Lor Village, Tegal City, is as follows:

a. BEP (Break Even Point)

1). Price of BEP (Break Even Point)

BEP Price = Total Production Cost

Number of Egg Production

= Total Production Cost

Number of Egg Production

= IDR147.305.000

92,550

= IDR 1,592 per item

This means that at the egg price level of IDR 1,592, Mrs. Ropiko's duck farming business experienced a break-even point or a position where the business experienced neither profit nor loss. In the business of laying ducks, Mrs. Ropiko, the selling price of duck eggs is around IDR 1,700 to IDR 2,100. From the calculation above, the BEP Price is IDR 1,592. It can be said that the selling price of laying ducks is above the BEP price. So that it can be explained that Mrs. Ropiko's laying duck business is to be developed or anyone who wants their funds to be worthy of Mrs. Ropiko's in the field of laying duck farming is said to be worthy of investment.

2). Volume BEP (Break Even Points)

Volume BEP = Total Production Cost

Average selling price

= IDR 147,305,000

IDR 1,883

= 78. 215 items

This means that at the level of duck egg production as many as 78,215 eggs, Mrs. Ropiko's duck farming business experienced a break-even point or a position where the business experienced neither profit nor loss. In the business of laying ducks, Mrs. Ropiko, the production level of duck eggs is 92,550 eggs. From the results of the above calculation, the BEP Volume number is 78,215 points, it can be said that the number of duck egg production is above the BEP Volume. So that it can be explained that Mrs. Ropiko's laying duck business is to be developed or anyone who wants their funds to be worthy of Mrs. Ropiko's in the field of laying duck farming is said to be worthy of investment.

b. R/C Ratio (Cost Income Ratio)

R/C Ratio = Revenue

Cost

= Income

Cost

= IDR 177,690,000

IDR 147,305,000

= IDR 1.2062727

From the results of calculations using the R/C Ratio (Revenue Cost Ratio) method, the results are 1.2062727. It means 1.2062727 > 1 ; In other words, for every IDR 1,- the costs incurred will generate an income of IDR 1.2062727. So that it can be explained that the laying duck business of Mrs. Ropiko, Pesurungan Lor Village, Tegal City is feasible to be developed or to anyone who wants to have funds Mrs. Ropiko in the laying duck business, it is said to be feasible to invest because the amount of income is greater than the total operational costs incurred.

c. B/C Ratio ( Benefit Cost Ratio )

B/C Ratio = Benefit

Cost

= Profit After Tax

Cost

= IDR 28,153,000

IDR 147,305,000

= 0.191123

From the results of calculations using the B/C Ratio (Benefit-Cost Ratio) method, the results are 0.191123. This means that the results obtained are 0.191123 > 0. In other words, every IDR 1 of the costs incurred will get a profit of IDR 0.191123, or the rate of profit obtained is 19.11%. So that it can be explained that the laying duck business of Mrs. Ropiko, Pesurungan Lor Village, Tegal City is feasible to be developed or anyone who wants to invest their funds to Mrs. Ropiko in the field of laying duck farming is said to be feasible to invest.

This research is in line with the results of Suharda's (2013)[10] research which explains that the case study duck business in Percut Village, Kec. Percut Sei Tuan Kab. Deli Serdang deserves to be developed. This is also in line with Asnidar's research (2017)[12] which explains that the home industry of opaque crackers in the village of Paloh Meunasah Dayah, Muara Satu District, North Aceh Regency is feasible. The results of the research by Lubis (2021)[13] also explain that the KUBE Nurhikmah Karas-karas industry business has a B/C ratio = 2.06 meaning that it has the opportunity to be developed.

IV. CONCLUSION

Business analysis from the financial aspect of the laying duck farming business, Mrs. Ropiko, Pesurungan Lor Village, Tegal City, can be concluded as follows:

1. BEP (Break Even Point)

The selling price of duck eggs per egg is higher than the BEP price. Likewise, the total production level produced by the laying duck business produces a higher volume than the BEP Volume. So that the laying duck business of Mrs. Ropiko, Pesurungan Lor Village, Tegal City is said to be feasible to be developed or anyone who wants to invest is said to be eligible to invest in this business sector.

2. R/C Ratio (Revenue Cost Ratio)

Based on the analysis of the R/C Ratio (Revenue Cost Ratio) it can be explained that the value of the R/C Ratio is > 1 with the conclusion that the income is higher than the costs incurred. So that the laying duck business of Mrs. Ropiko, Pesurungan Lor Village, Tegal City is said to be feasible to be developed or anyone who wants to invest is said to be eligible to invest in this business sector.

3. B/C Ratio (Benefit Cost Ratio)

Based on the analysis of the B/C Ratio (Benefit Cost Ratio) it can be explained that the value of the B/C Ratio is > 0 with the conclusion that the profit obtained in the laying duck business of Mrs. Ropiko, Pesurungan Lor Village, Tegal City is 0.1911 or a profit rate of 19.11 %. So that the laying duck business of Mrs. Ropiko, Pesurungan Lor Village, Tegal City is said to be feasible to be developed or anyone who wants to invest is said to be eligible to invest in this business sector.

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