www.bircu-journal.com/index.php/birci
Budapest International Research and Critics Institute-Journal (BIRCI-Journal)
Humanities and Social Sciences
ISSN 2615-3076 Online)
ISSN 2615-1715 (Print)
Budapest Institute

Socio-Economic Study on the Feasibility of Kisar Sheep Farming on Kisar Island, Southwest Maluku Regency, Maluku Province

Pieter Melianus Ririmase[1], Paul Melkianus Puttileihalat[2], Christian W. Patty[3]
[1,2,3]*Faculty of Agriculture, University of Pattimura, Indonesia*
melianusririmasse@gmail.com, pmputtileihalat@gmail.com, chrispatty@yahoo.com

Abstract

This study aims to describe breeders who carry out kissar sheep farming activities, as well as analyze the income and profits of farmers. This research was conducted on Kisar Island, Southwest Maluku Regency using a survey method and a purposive sampling of 25 farmers. Data analysis was carried out quantitatively. 52 percent of breeders are aged 31-50 years, 76 percent have an elementary school education, 36 percent of breeders have a business duration of > 21 years, 20 percent have a main job as farmers, and only 4 percent of breeders. The sheep farming business on Kisar Island suffers losses and does not increase income because the labor sacrificed is quite large, and every year there is a decline in the sheep population due to limited capital to expand its business so that it is filled with others because of the family's economic pressure, marketing is still carried out.

Keywords
feasibility; breeders; kisar sheep

I. Introduction

The livestock sub-sector is a sub-sector that also has a major contribution to national development in rural areas. Based on the formation of Indonesia's Gross Domestic Product (GDP), the livestock sector contributed 1.57% to the 2017 National GDP. The increase in production boosted the 2017 livestock sector GDP by Rp. 148.5 trillion up Rp. 23.2 trillion from 2013 amounting to Rp. 125.3 trillion. Meanwhile, in terms of employment, it shows that around 3.84 million workers are working in the livestock sub-sector. The livestock sub-sector contributes to absorbing 11.51% of the workforce in the agricultural sector. Meanwhile, to the total national workforce, the livestock sub-sector contributed 3.17%. The number of workers in the livestock sector in 2018 was 4.83 million people, an increase of 27.3% from 2015 (BPS, 2019). The explanation above shows that the livestock sector plays a strategic role in absorbing labor and meeting food needs (source of animal protein). The need for animal food consumption continues to increase along with the increase in population. Public consumption of protein continues to increase such as meat, eggs, and milk (Nugroho et al., 2012; Siregar, 2012).

Sheep are a ruminant group whose business does not require a large enough capital when compared to other large animals. However, until now, although the livestock sub-sector has made an important contribution to rural development, the availability of lamb in Indonesia has not been able to meet the needs of the domestic market. Based on BPS data in 2021, it shows that the sheep population in Indonesia is still fluctuating, namely; in 2018 (17,611,392 individuals), 2019 (17,833,732 individuals), 2020 (17,523,689 individuals) and 2021 (17,902,991 individuals). Meanwhile, the population of sheep in Maluku Province in 2018 (11,335 heads), 2019 (11,204 heads), 2020 (11,299 heads), and 2021 (11,321) also experienced fluctuations. Sheep farming has not developed well due to

DOI: https://doi.org/10.33258/birci.v5i2.5200

several reasons, namely; 1) there are still few entrepreneurs who invest in this field, 2) the center for lamb meat production is still centered on the island of Java, and 3) sheep farming carried out by the community is still traditional, including in Maluku (JF Salamena, 2018).

Kisar Island is an area located in the administrative area of Southwest Maluku Regency, Maluku Province with an area of 81.83 Km 2, also has local specific livestock potential, namely Kisar sheep. However, until now the method of community management in the area is still simple, the grazing system is still in the open and no housing system is in accordance with the housing requirements, and nutrition has not been fulfilled properly so that the ideal weight of lamb does not meet the standards (JF Salamena, 2007). 2018). If this problem is considered properly, it can improve the economy of the community or breeders in the region. Based on the description above, this research is entitled: Socio-Economic Study of the Feasibility of Kisar Sheep Farming on Kisar Island, Southwest Maluku Regency, Maluku Province

II. Research Method

2.1. Research Paradigm

The paradigm used in this research is paradigm *positivism*. The basic consideration is using *positivism* because this paradigm is rooted in ontological understanding which discusses the truth of a fact. To get to the truth, an approach method is needed to prove the truth of these facts. The approach method is a process of collecting data for research, to prove the truth of the facts.

The approach method used in this research is quantitative. According to Sugiyono, (2015) said, "the quantitative approach method is a method based on the *positivist paradigm*, used to examine certain populations or samples, data collection using research instruments, data analysis is quantitative or statistical, with the aim of testing hypotheses determined based on the theory used.

2.2. Research Location and Time

This research activity was carried out on Kisar Island, Southwest Maluku Regency, Maluku Province with the consideration that the area is endemic to Kisar sheep. This research was conducted in January 2022.

Based on the above considerations, the researchers are interested in conducting research in the area, with the research material being farmers who raise sheep.

2.3. Population and Sampling

a. Population

The population is a generalization area consisting of objects/subjects that have certain qualities and characteristics determined by the researcher to be studied and then draw conclusions (Sugiyono, 2020). According to Handayani (2020), the population is the totality of each element to be studied which has the same characteristics, it can be individuals from a group, event, or something to be studied. Based on the explanation above, it is concluded that the population is a generalization area that has certain characteristics or characteristics that were selected by the researcher according to the characteristics of the study.

The population in this study is the people on Kisar Island who carry out Kisar sheep farming activities. Based on data obtained from the Kisar District Office, shows that there

are several villages on Kisar Island whose people carry out sheep farming activities. Table 1 describes several villages in Kisar Island according to the characteristics of the study.

Table 1. Livestock and maize crop potential in several villages on Kisar Island

No	Sample Village
1.	Yawuru
2.	Purpura
3.	Nomaha
4.	Lebeau
5.	West Oirata
6.	East Oirata
	Amount

Source: Kisar Sub-District Office

b. Sample

According to Siyoto & Sodik (2015), the sample is part of the number and characteristics possessed by the population or a small part of the population members taken according to certain procedures so that they can represent the population. Therefore, the sample selected in each village is a sample that can represent the population.

Researchers in determining the research sample, based on secondary data obtained from the local sub-district office. Before determining the sample, the researcher conducted a research pre-survey to assess the existence of each breeder according to the characteristics of the research to be carried out by the researcher as a condition for selecting the sample. The requirements in this study are the people on Kisar Island who carry out Kisar sheep farming activities

The results of the pre-survey using the *proposive sampling method* showed that from the 6 villages according to the local sub-district office list, several respondents were obtained. Table 2 describes several respondents who were selected according to the characteristics of the research in each village as follows.

Table 2. Distribution of respondents based on purposive sampling in each village on Kisar Island

No	Sample Village	Number of Respondents (person)
1.	Yawuru	2
2.	Purpura	4
3.	Nomaha	3
4.	Lebeau	3
5.	West Oirata	6
6.	East Oirata	7
	Amount	25

Source: Primary Data, 2022

2.4. Data Collection Technique

According to Sugiyono (2014), "there are two main things that affect the quality of research data, namely the quality of research instruments, and the quality of data collection. In research, besides requiring the right method, it is also necessary to choose relevant techniques and data collection so that the results of the research are objective. According to Zuriah (2009) states, "The use of appropriate data collection techniques and

tools enable objective data to be obtained". According to Bungin (2011), "The data collection method is part of the data collection instrument that determines the success or failure of a study." Therefore, the data collection techniques used must be in accordance with the nature and characteristics of the research conducted or based on the approach used.

Based on the explanation above, the data collection technique was adjusted to the research variables. The variables observed in this study were related to;

a. Characteristics of sheep breeders, including; age, education level, length of business and employment status.
b. The level of income/profit earned by sheep breeders includes; income from sheep.

2.5 Data Analysis Techniques

Data analysis techniques are methods or methods used to analyze research data (Widodo, 2017). Analysis of the data used in this study is quantitative analysis in accordance with research needs, which consists of;

1. Descriptive analysis.

Descriptive analysis is a statistic that is used to analyze data by describing or describing the data that has been collected as it is without intending to make conclusions that apply to the public or generalizations (Sugiyono, 2017). In this study, the characteristics of breeders were analyzed using descriptive statistical analysis.

2. Farming Economic Analysis

The farming economic analysis aims to determine the income contribution of sheep farming. This analysis uses income analysis and B/C ratio analysis (Soekartawi, 2002).

III. Result and Discussion

3.1 Kisar Island Profile

Kisar Island is the outermost island within the framework of the Unitary State of the Republic of Indonesia and is included in the administrative area of Maluku Province, precisely in Southwest Maluku Regency, the Southern Islands with the District City of Wonreli. The island is located between 6 – 8 degrees south latitude, and 127 – 135 degrees east longitude. Geographically, Kisar Island in the north is bordered by the Romang Strait; To the south, it is bordered by the Timor Strait; To the west, it is bordered by the Wetar Strait, and to the East by the Letti Strait.

Kisar Island has an area of 67.52 Km ^{2}, with a total of 9 villages and 12 hamlets, and is included in the semi-arid climate agro-climatic zone with climate type D or E3. The climate type D according to Smith and Ferguson's classification is a dry month (lasts 5 months) and a wet month (lasts 7 months).

Annual temperature fluctuations on Kisar Island are between 25 and 33 degrees Celsius with an average temperature of 27 ^{o}C. Cold temperatures occur in July and August with an average temperature of 28 ^{o}C at night, while hot temperatures occur in November with an average -average temperature 28 ^{o}C.

3.2. Characteristics of Respondents of Kisar Sheep Farmers

Characteristics can describe the specific characteristics inherent in the respondent based on his thoughts, attitudes, and actions towards the environment to be able to maintain or meet the needs of life. Characteristics are used as a basis for assessing individual diversity in their ability to do work. Several indicators used to describe the characteristics of respondents in this study consisted of age, education level, experience,

and employment status. Table 3 describes the characteristics of farmer respondents in Kisar Island, Southwest Maluku Regency.

Table 3. Distribution of respondents based on the characteristics of farmers in Kisar Island

Characteristics of Farmers / Breeders	Category	N (person)	Percentage (%)
(1)	*(2)*	*(3)*	*(4)*
Age (Years)	20 -30	1	4
	31 - 50	13	5 2
	>51	11	44
Total		25	100
Level of education	SD	19	76
	Junior High School	5	20
	Senior High School	0	0
	PT	1	4
Total		25	100
Business Length (Year)	< 5	6	24
	5 – 10	5	20
	11 – 16	3	12
	16 – 21	2	8
	> 21	9	36
Total		25	100
Main Job	Civil Servant	1	4
	Farmer	20	80
	Breeder	4	16
Total		25	100
Side job	Farmer	5	20
	Breeder	19	76
	Other	1	4
Total		25	100

Source: Primary Data, 2022

a. Age

Age is the period of life that the farmer has passed until the time the research is carried out. Age d was calculated starting from the year of birth and rounded off to the nearest birthday at the time the study was conducted, using an interval data scale.

Table 3 shows that most of the sheep breeders on Kisar Island are in the 31-50 year age category, which is 13 people or 52 percent, and at least 1 person is in the 20-30 year age category or 4 percent.

It can be explained that farmers at the age of 31-50 years are those who are of productive age which can be seen from their physical condition and have the ability to carry out an activity. In addition, most of them at this age are married so they have the responsibility to be able to provide for the economic and psychological needs of their families. Meanwhile, there are very few breeders aged 20-30 years in the area for several reasons, namely; 1) most of them at that age choose to study outside the area, such as on Moa Island and Ambon Island; 2) they prefer to work in an office rather than become a farmer because they think the future is less promising.

Based on the explanation above, it can be concluded that the age of farmers also influences their attitudes and behavior in making decisions to carry out livestock activities based on the current situation and conditions they experience.

b. Level of Education

The education seen in this study is more focused on formal education. Education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious-spiritual strength, self-control, personality, intelligence, noble character, and skills needed by themselves, society, nation, and state (UU Law No. No. 20 of 2003).

Table 3 shows that most of the breeders are in the elementary education level category as many as 19 people or 76 percent, and at least 1 person is in the tertiary education category or 4 percent.

This shows that the level of education of sheep breeders is generally still low. Low education makes them less rational in accepting and understanding new information. In addition, this area is the outermost area that is not supported by communication facilities and infrastructure so the availability of information is also increasingly limited. This has an impact on their desire to improve their business towards a better or commercial nature. Even though they are quite experienced, if they are not supported by good education and supporting facilities, the activities they are trying to do will not develop properly.

Based on the explanation above, it can be concluded that low education, isolated areas, and lack of information are factors that greatly impact the behavior of sheep farmers to make changes for the better concerning these activities.

c. Business Length

The length of the business or the experience of doing business is the length of experience that a sheep farmer has until the time the research was conducted. Staw (2004) states that business experience is the best predictor of success, especially when the new business is related to previous business experience. The need for business experience is increasingly needed with the increasing complexity of the environment.

Table 3 shows that most of the breeders have business experience of more than 21 years as many as 9 people or 36 percent and having the lowest experience of 16-21 years only as many as 2 people or 8 percent.

This shows that the business activity is not a new business carried out by them, but is a business that has been running for quite a long time. Long time trying to relate to the experience of livestock owned by a farmer. Livestock experience is one of the most basic factors for a person in developing his business and greatly influences the success of the business. It is hoped that the longer the experience of doing business, the better the progress and success achieved by farmers.

Based on the explanation above, it can be concluded that most of the farmers in the area have a lot of experience in raising sheep. However, if this experience is not accompanied by various information and the latest innovations, this condition causes them to try to rely on local or traditional knowledge, so this will also affect the success they get.

d. Main Job and Side Job

The results showed that the main job of sheep farmers was as food crop farmers as many as 20 people or 88 percent, with the main crop being corn. Meanwhile, sheep farming is a side job for 76 percent.

It can be explained that farmers are more or more dominant in carrying out business activities of corn plants as their main work because corn is the staple food of the local community for generations as a substitute for rice. Meanwhile, sheep farming is a side job because they don't consume lamb meat every day, and marketing it is very difficult to go outside the area because of the low development supporting factors, such as; sea transportation is still limited.

3.3. Kisar Sheep Farming Economic Analysis

a. Production cost

Production costs are costs incurred for production activities based on the time of use. According to Mubyarto (1994) *in* Mulyadi (2015), said that production costs based on the time of use can be divided into *fixed costs* and *variable costs*. Fixed costs are costs that arise due to the existence of fixed production factors and are issued for one production process. While variable costs are costs that arise due to the existence of non-fixed production factors that can be used several times during the production process.

Fixed costs in sheep farming in Kisar Island are the cost of shed and equipment depreciation, and labor and variable costs are feed, medicine, and transportation. In this study, the cost of seeds was not found because the last year the farmers did not buy seeds. The average total production cost per year is Rp. 7,782,000. The results showed that the largest cost component per year was the cost of feed amounting to Rp. 4,248,000 or 54 percent, then labor costs of Rp. 3,456,000 or 44.41 percent, the cost of depreciation of the cage of Rp. 36,000 or 0.46 percent, depreciation of equipment cage for Rp. 30,000 or 0.39 percent, transportation of Rp. 8,000 or 0.10 percent and the cost of medicines is Rp. 4,000 or 0.05 percent. The cost of feed and labor is a calculated cost. This means that although in real terms these costs are not incurred, the labor sacrifices used are taken into account. Table 4 illustrates the economic analysis of sheep on Kisar Island.

Table 4. Average production costs, revenues, income, and B/C ratio of sheep farming in Kisar Island

Cost component	Cost (Rp/year)	Percent (%)
Shrinkage of the cage	36,000	0.46
Depreciation of cage equipment	30,000	0.39
Labor	3,456,000	44.41
feed	4,248,000	54.59
Seeds	0.00	0.00
Drugs	4,000	0.05
Transportation	8.000	0.10
Average production cost/year	7,782,000	100
Average revenue/year		6,820,000
Average income/year		-746.000
BC ratio		0.096

Source: Primary Data, 2022

b. Receipts and Expenditures

Revenue in this study was obtained from the sale of sheep, consumption, and giving/donating to other parties. The results showed that the average annual revenue of Rp. 6,820,000 which consists of livestock sales of Rp 5,886,000 and the remainder is obtained from consumption and giving/donating to other parties.

Based on the results of the study, it was found that the production cost was greater than the revenue, so it can be said that the sheep breeders in Kisar Island suffered losses. This condition is not directly felt by farmers because they tend to only take into account the real costs incurred, but do not take into account the labor sacrifices devoted to managing their sheep farming business. The large loss experienced by farmers is Rp. 746,000 per year. To overcome the above conditions, in addition to increasing production, it is also necessary to improve maintenance management so that the selling price of the livestock that is marketed can be increased.

In addition to increasing the selling price, it is also necessary to establish an economic institution that can accommodate the production of breeders, so that the stability of the selling price is maintained and can shorten the marketing chain because the low level of income is also caused by the low selling price at the farmer level. Therefore, it is necessary to change the habits of farmers to market livestock only when the family's economic needs are urgent so that they have the power to negotiate with traders.

c. B/C Ratio

Analysis of the B/C Ratio for sheep farming on Kisar Island is 0.091 (B/C < 1), meaning that for every Rp. 1,000 spent on sheep farming, the farmer will suffer a loss of Rp. 9.10. If this condition is allowed, the farmer's business will continue to experience losses and farmers will switch to other, more profitable businesses. The labor sacrificed is large enough for business, so it does not increase family income. In addition, there will be a decline in population due to limited capital to expand the business, filled with others because of the family's economic pressure, marketing will still be carried out.

IV. Conclusion

Based on the objectives and discussions in this study, it is concluded:

1. 52 percent of breeders are aged 31-50 years, 76 percent have an elementary school education, 36 percent of breeders have a business duration of > 21 years, 20 percent have a main job as farmers, and only 4 percent of breeders.
2. The sheep farming business on Kisar Island suffers losses and does not increase income because the labor sacrificed is quite large, and every year there is a decline in the sheep population due to limited capital to expand the business.

References

BPS in (2021). Sheep Population by Province (Tails), 2019-2021. Central BPS, URL; https://www.bps.go.id/indicator/24/473/1/population-domba-menurut-provinsi.html

BPS, 2019. National GDP and Total Manpower in the Livestock Sub-Sector. 2018 – 2021. Central BPS URL;https://www.bps.go.id/publication/2019/07/04/daac1ba18cae1e90706ee58a/statistik-indonesia-2019.html

Bungin, Burhan. (2011). Qualitative Research. Jakarta: Kencana Predana Media Group

JF Salamena, 2018. Study of Integrated Sheep and Corn Farming Development Model to Support Food Availability in Kisar Island, Maluku Province.

Ministry of National Education. (2003). RI Law No.20 of 2003. concerning the national education system

Nugroho, E. et al. (2012) 'Study on evaluating the benefits and contributions of APBN funds in livestock development in East Java', Journal of Animal Sciences, 20(2), pp.

14–23
Siyoto, Sandu and Ali Sodik. (2015). Basic Research Methodology. Yogyakarta: Media Literacy Publishing Zuriah (2009)
Soekarno. (2002). Basic Principles of Agricultural Economics: Theory and Application. Jakarta: PT RajaGrafindo Persada.
Staw, Barry M. (2004). Psychological Of Dimensions Organizational Behavior, Third Edition. New Jersey: Pearson Prentice Hall. Mulyadi, D. 2015. Organizational Behavior and Service Leadership. Bandung: Alphabet.
Sugiyono (2015). Combination Research Methods (Mix Methods). Bandung: Alphabeta
Sugiyono, (2017). Sugiyono. (2017). Quantitative, Qualitative, and R&D Research Methods. Bandung : Alfabeta, CV.
Sugiyono, (2020). Qualitative Research Methods. Bandung: Alphabeta. Handayani (2020).
Sugiyono. (2014). Educational Research Methods Quantitative, Qualitative, and R&D Approaches. Bandung: Alphabeta.
Widodo. (2017). Popular & Practical Research Methodology. Jakarta: Rajawali Press
Zuriah Nuzul, (2009), Methodology of Social Research Educational Theory-Application, Jakarta: PT Bumi Aksara.