



Study of Socioeconomic Profile of Smallholder Beef Cattle Farming Business (Case Study of Kelompok Tani Ternak Ustan Mandiri)

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Abstract. Farmers socioeconomic profile can influence the running of beef cattle farming business. This study aims to determine the socioeconomic profile of beef cattle farming business run by active members of the Kelompok Tani Ternak (KTT) Ustan mandiri. This research was conducted in Dolokgede Village, Tambakrejo District, Bojonegoro Regency on August 2024 to September 2024. The research method used is descriptive quantitative with a sample of 25 farmers using primary and secondary data. The sampling method used is purposive sampling because it has its own criteria related to what will be studied. The data was analyzed using quantitative descriptive analysis. The variables in this study are socioeconomic profile of smallholder farmers based on age, gender, education level, number of family members, livestock experience, and scale of livestock ownership. The results of the study showed that farmers who are in the productive ages of 30-50 years and dominated by men with a percentage 92%. The level of farmers education is relatively low with the number of family dependents of 3 people. Livestock experience is between 10-40 years with a small scale of ownership only 2-3 heads. Improvement programs focus on targeted training and support that align with the farmers.

Keywords: Farmers, Socioeconomic, Beef Cattle, Business

1 Introduction

Livestock resources are an agricultural subsector that plays an important role in the national economy. The livestock sector has great business opportunities and potential for the people of Indonesia where most of the population are smallholder farmers, which consists of individual businesses and groups of breeders [1]. Livestock businesses that have great prospects and potential to develop is beef cattle farms.

Beef cattle farming in Indonesia is managed in traditional and modern ways. Smallholder beef cattle farming in Indonesia is mostly traditional and the management method still uses simple technology and is only for side business [2]. Previous studies have discussed the limitations of smallholder livestock productivity, including lack of capital, inadequate access to extension services, and low adoption of innovation.

Smallholder livestock farming is the main support, so active efforts are needed to increase the population and productivity [3].

Based on data Central Statistics Agency, the population of beef cattle in East Java is increasing every year [4]. Bojonegoro district is one of the districts that has the largest increase of beef cattle population in East Java, in 2018, the beef cattle population was 231,120, increasing to 258,563 in 2021 or with an increase of 11.87% [5]. One of the districts in Bojonegoro regency that has potential for beef cattle business development is Tambakrejo district, especially in Dolokgede village. Beef cattle farming in this village has started to develop through the establishment of a *Kelompok Tani Ternak* (KTT), namely KTT Ustan Mandiri in 2012. The livestock business run by members of KTT Ustan Mandiri based on observations has not developed optimally. Average community members lack information about good and correct livestock management, so the livestock production result is not optimal [6].

Farmer socioeconomic profile is one of the factors that influence the success of cattle farming. The ability of a farmer to manage the livestock business will indirectly affect livestock productivity. Beef cattle farming can grow if farmers change their mindset and improve their characteristics through practical knowledge related to the livestock business [7]. The socioeconomic profile of individual cattle farmers become a distinctive feature that may change according to the surrounding environmental conditions. Based on the above, this study was conducted to examine the socioeconomic profile of smallholder beef cattle farmers run by members of KTT Ustan Mandiri.

2 Materials and Methods

2.1 Time and Location

This research was conducted in Dolokgede Village, Tambakrejo District, Bojonegoro Regency, East Java. Data collection was carried out from August 2024 to September 2024. Determination of Bojonegoro Regency as the research location was carried out purposively, with consideration that Bojonegoro Regency is one of the largest beef cattle producing areas in East Java province.

2.2 Sampling Method

The number of respondents was 25 beef cattle farmers who were determined by purposive sampling. Purposive sampling method was used because researchers have their own criteria related to what will be studied, namely farmers with smallholder livestock businesses focus on beef cattle farming and are active members of the KTT Ustan Mandiri.

2.3 Data Collection

The approach used in this research was descriptive quantitative approach. Descriptive quantitative research methods including interview and observation, survey, and

documents. The type of data collected are primary and secondary data. Primary data was obtained from direct interviews with beef cattle farmer respondents using a specified questionnaire. Secondary data includes various data and information available in documents from the profile of KTT Ustan Mandiri, BPS (Central Statistics Agency), books, previous research, and various other relevant agencies that will support the research.

2.4 Variable

The variable used in this study are the socioeconomic profile of beef cattle farmers including age, gender, education level, number of family members, farming experience, and scale of livestock ownership.

2.5 Data Analysis

The analysis method used in the research is descriptive quantitative analysis. Descriptive quantitative analysis was used with tabulation models, table analysis, frequency distribution, and percentage of each variable.

3 Results and Discussion

3.1 Age of Farmers

Age of farmer affects the farmer ability to manage his livestock business. The way to measure a person's physical strength is by measuring their age [7]. Farmers age has a significant impact on their physical strength and knowledge because cattle industry requires human effort for maintenance. Increasing physical ability with age at certain age ranges will reduce productivity [8].

Table 1. Age of Farmers

No.	Classification	Category	Total Respondent	Percentage (%)
1.	Age	<30 Years	1	4
		30-40 Years	5	20
		41-50 Years	7	28
		>50 Years	12	48
		Total	25	100

Age classification shows that the majority of farmers are more than 50 years old with a percentage of 48% (12 farmers). This shows that the beef cattle business, based on the age classification of the farmers, is mostly managed by farmers who belong to the old age group, but still in productive category (Table 1). In the productive category, the age classification ranges from 15 to 64 years, while the non-productive age is ≥ 65 years [9]. Farmers in the productive age are more willing to take chances and try new things

because they are interested in absorbing technology and have an interest about new knowledge. Older farmers can also accept innovations well if they are presented in the right way, especially if the innovation is proven to provide real benefits [10].

3.2 Gender of Farmers

Gender in livestock production is one of the factors that determines the work to be done. Gender can affect productivity because cattle farming requires more energy to maintain. Beef cattle farming businesses with mostly female workers will affect effectiveness due to physical differences between men and women.

Table 2. Gender of Farmers

No.	Classification	Category	Total Respondent	Percentage (%)
2.	Gender	Man	23	92
		Woman	2	8
		Total	25	100

The results of the research based on Table 2 shows that the gender of cattle farmers men dominate with a percentage of 92% (23 farmers). This is because cattle farming requires more energy in its maintenance. According to them, a woman's job is to take care of the house and manage family finance. However, it does not exclude the possibility that men and women can work together in its implementation. Gender also affects a person's work productivity and the physical differences between men and women will certainly have an impact on the results of their work [11]. Proper handling and placement of job positions will affect the effectiveness, productivity and development of the business being managed.

3.3 Farmers Education Level

Education level of farmers is an indicator of the quality population and describes the characteristics of farmers in terms of knowledge, skills and ways of thinking in developing their business. The low level of education among farmers is also caused by economic condition [12]. Farmers' education level is mostly in the range of elementary school, junior high school, high school/vocational school, and Academy/College. Education is an important factor in livestock farming, because livestock farming requires skills, experience and insight in its management.

Table 3. Farmers Education Level

No.	Classification	Category	Total Respondent	Percentage (%)
3.	Education Level	Elementary School	17	68
		Junior High School	4	16
		High School	2	8
		Academy/College	2	8
		Total	25	100

The results showed that the level of education owned by respondents was at a low level of education, which is only up to elementary school graduates, with a total of 17 farmers with a percentage 68% of the total respondent (Table 3). Farmers who have the highest level of education at academy/college education levels are only 2 farmers with a percentage of 8%. The level of education of farmers will affect their way of thinking and the level of acceptance of innovation and technology [13]. The low level of education of farmers will affect their attitudes, perspectives, and inhibiting factors in the development of their livestock business. Farmers who have a higher level of education will have good knowledge and skills that will be able to develop and run their livestock business.

3.4 Number of Family Members

Number of family dependents based on the number of members living under one roof. The number of family members can determine the size of the needs that must be met. Family members are an asset of human resources, especially in productive age to help in the livestock business. The large number of family dependents encourages entrepreneurs to carry out many activities, especially in increasing of family income [14]. Otherwise, if family members are not actively working, they may become a burden on the family.

Table 4. Number of Family Members

No.	Classification	Category	Total Respondent	Percentage (%)
		2	2	8
4.	Number of Family Members	3	10	40
		4	8	32
		>5	5	20
Total			25	100

The results showed that the largest number of family dependents were 3 and 4 people with a percentage of 40% and 32%. Based on the interview results, most family members also play a role in livestock maintenance. Number of family dependents can also help farmers in terms of labor, because if there are many family members, it's increasingly easier for farmers to carry out livestock farming because they are assisted by family labor [14].

The number of family members, from the point of labor supply, will provide a positive contribution to the operation of the business, because the source of labor can use family labor. The use of family labor will reduce production costs, especially labor costs. However, the larger number of family dependents but not make a positive contribution, will affect the running of the livestock business. The large number of dependent family members will affect the income of farmers because the farmers will have to pay more expenses [15]. The number of family dependents is also related to household income, which affects household consumption patterns.

3.5 Livestock Experience

Livestock experience is the length of time that farmers have been involved in farming [16]. Experience is the knowledge that farmers have gained through routine daily activities or events that they have experienced. Knowledge in managing livestock enterprises increases as their rearing experience. Compared to a beginner farmer, farmer with more farm management experience have preferred knowledge, attitudes, and abilities.

Table 5. Livestock Experience of Farmers

No.	Classification	Category	Total Respondent	Percentage (%)
5.	Livestock Experience	<10 Years	5	20
		10-25 Years	6	24
		26-40 Years	6	24
		>40 Years	8	32
Total			25	100

The results of the research based on Table 5 show that the experience of rearing beef cattle by members of the KTT Ustan Mandiri has the largest percentage in the range of more than 40 years with a percentage of 32%. This shows that the average beef cattle farmer is in a good category. Livestock experience is one of the important factors that a farmer must have to decide all policies that will be applied in his business [17]. Farmers with experience will be able to overcome problems, while others without experience will find it difficult to manage such things.

3.6 Scale of Livestock Ownership

Scale of livestock ownership is a factor that influences business development. The frequency of larger scale ownership will take longer and farmers can see the development or weaknesses in the business being run. Large-scale ownership will affect the economy, livestock experience, and the amount of capital that needs to be spent. Small-scale livestock businesses will be easier to maintain, and livestock will receive extra attention from farmers.

Table 6. Scale of Livestock Ownership

No.	Classification	Category	Total Respondent	Percentage (%)
6.	Scale of Livestock Ownership	1	6	24
		2-3	13	52
		4-5	5	20
		>6	1	4
Total			25	100

The results showed that the scale of livestock ownership owned by beef cattle farmers is the largest livestock ownership at 2-3 heads with a percentage of 52%. This shows

that the scale of business owned is classified as a small category. The scale of ownership of beef cattle farmers who have the status of smallholder farms is grouped into 3 parts, namely small scale (1-5 heads), medium scale (6-10 heads) and large scale (>10 heads) [18]. The scale of livestock ownership affects the income level of farmers. The size of the business scale can be influenced by economic capacity, farmer experience, and cooperation [19]. The amount of fixed costs borne by each cattle head in livestock businesses with larger ownership tends to be low when compared to the scale of ownership with a small number [20]. Farmers who can manage their business well will gradually be able to increase the scale of their business.

4 Conclusion

Based on the research result, the conclusion is the socioeconomic profile of smallholder beef cattle breeders who are active members of the KTT Ustan Mandiri are farmers in a productive age of 30-50 years, and dominated by men with a percentage of 92%. The level of farmers education is relatively low, only as elementary school graduates, with a total of 3 family dependents. Based on the livestock experience, farmers experience is between 10-40 years old with a small scale of ownership of only 2-3 heads. In line with the findings, it is necessary to Improvement programs focus on targeted training and support that align with the farmers, such as technical skills, business knowledge, and capacity of the farmers in managing the beef cattle farming so it can develop more their own business and be more productive.

Disclosure of Interests. The authors have no competing interests to declare that are relevant to the content of this article.

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