

Human Capital Analysis of Beef Cattle Breeding Business Based on Village Breeding Centre in Gondangrejo Subdistrict, Karanganyar District

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Abstract—The purpose of this research is to analyze the human capital of beef cattle breeding business based on village breeding centre in Gondangrejo Subdistrict, Karanganyar District. The study was conducted in Jeruksawit Village, Gondangrejo Sub district, Karanganyar District. The selection of the location of the study was intentional (purposive sampling) and the taking of respondents was determined by purposive sampling method. Data collection techniques are carried out by literature study, observation, interviews and Focus Group Discussion (FGD). The research design uses descriptive analysis. The results showed that the human capital of farmer in a beef cattle breeding business based on village breeding centre in Jeruksawit Village, Gondangrejo Subdistrict, Karanganyar District which includes the level of formal education in not good category with the percentage of respondents amounted to 76%, the level of health in good category with the percentage of respondents amounted to 86 % . The conclusion of this study was the analysis of human capital of beef cattle breeding business based on village breeding centre in Gondangrejo District, Indonesia was the level of formal education in not good category and the level of health in good category.

Index Terms—Human capital analysis, farmer, beef cattle breeding, village breeding centre.

I. INTRODUCTION

Beef needs continue to increase in line with increasing population and real per capita income, as well as consumer tastes. The government's efforts to meet the adequacy of meat are by issuing the Volume IX Economic Policy Package which focuses on ensuring the supply and stability of beef prices. This is done to anticipate domestic beef needs continue to increase from year to year.

In 2016 the national beef demand for the year reached 674.69 thousand tons, equivalent to 3.9 million head of cattle. The increasing demand for beef cannot be met by the supply of beef from local farmers. Therefore, the government is currently trying to increase the supply of

domestic beef production. Some of these efforts were carried out, among others, through efforts to increase population, logistics and distribution development, improvement of cattle and beef trade systems, and institutional strengthening through the Center for People's Animal Husbandry (SPR). Local cattle breeder production only reaches 439.53 thousand tons per year, equivalent to 2.5 million head of cattle. Thus, there is still a shortage of supply of around 235.16 thousand tons so that to meet the need for beef is imported [1].

Domestic beef supply one of them is fulfilled from farmers from Karanganyar Regency. Karanganyar Regency is one area that has the potential of beef cattle farming business. This can be seen from the number of breeders reaching 31,474 people with the number of beef cattle at 62,948. All beef cattle are bred with artificial insemination (IB). Management of beef cattle in the region is still traditional and not the main job [2].

The main problem faced in the production activities of beef cattle (beef cattle) in the country is the slow growth of population caused by many factors, including: (a) Breeding activities carried out by farmers with very small scale of 1-3 animals female cows with traditional technology where the ability to provide very limited feed, (b) Artificial Insemination Services (IB) is still constrained by the supply of superior bull cattle, costs and culture of farmers who are not ready and (c) Cutting off productive female cattle is difficult to control so that livestock resources continue to experience extinction [3].

The strategy and implementation of the pattern of development of beef cattle methodologically must pay attention to the characteristics of the production system [4], [5] and consider geography, agroecosystem, land use intensity, livestock and crop types, and production objectives [6], [7]. Increasing the role and sustainability of livestock in developing countries [8] through optimizing the management of natural resources in an environmentally friendly manner. The key factor for the development of beef cattle breeding is the improvement of the existing production system [5], [9] based on institutional groups that empower farmers' economies [10].

One of the efforts to empower the community, especially local cattle farmers in fulfilling beef supply towards competitive self-sufficiency in food is through the growth of rural breeding centers. According to [11] in conducting beef breeding, it is necessary to involve the corporation through partnerships between corporations and smallholder livestock.

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In this partnership the institution that becomes the core is the government which in this case implements and optimizes the functions of the Nursery Agency or BUMN / D in the integration business or Corporation / Private / Cooperative, while the plasma is the beef cattle farmers around the company core.

Village Breeding Center-based community empowerment efforts through several innovations include (a) with various funding sources to facilitate people who have limited capital; (b) guidance on reproductive technology to accelerate the improvement of the quality and quantity of livestock seedlings, by providing various types of frozen semen; (c) forming seed bags that produce highly competitive products; (d) mobile animal health services to prevent contracting the disease; and (e) reduce unemployment with training and guidance for entrepreneurship in the field of animal husbandry [12].

According to [13] in order to realize the independence and resilience of animal food in a sustainable manner with the aim of improving the welfare of farmers and the competitiveness of livestock products, Indonesia must be able to develop models that are in accordance with the agroecological and socio-cultural conditions of the community. The strategy of developing beef cattle must be based on feed sources and locations.

II. METHODOLOGY

This research was conducted in Gondangrejo, Karanganyar District. The selection of research sites was done purposively based on certain considerations taken based on previously known characteristics or characteristics in accordance with the objectives of the study [14]. The selected research location is Gondangrejo, Karanganyar District based on the consideration that Gondangrejo, Karanganyar District was a center area of beef cattle breeding used as research object. This location there are beef cattle farm. The respondents were selected by purposive sampling method. The purposive is a sampling technique in which the sample taken is the entire population to be studied [14]. Data analysis using descriptive analysis.

III. RESULTS AND DISCUSSION

A. Characteristics of Respondents

Characteristics of respondents in this study include the level of education, age of respondents, main occupation, number of family members and number of cattle ownership.

1) Age of respondents

The average age of farmers participating in this activity is 52 years. This shows that the age of the research respondents is classified as productive to work. The results are supported by the Manpower Act Number 13 of 2003, someone who is classified as a workforce aged 15 to 64 years [15]. The age of productive or young breeders is generally higher in curiosity about something and the interest in adopting technology is increasingly high [16].

2) Respondent education level

The education level of the average trainee is elementary school. The level of education of these farmers is low. Low education of farmers due to economic problems. Formal education is one of the factors that support the competence of farmers, because the knowledge they have can influence to think more rationally, choose alternatives and quickly accept or implement an innovation [17].

The skills and knowledge of farmers with relatively low levels of education need to be improved by providing non-formal education so that smallholder farmers are not left behind by the development of times and technology, especially in the development of livestock business [18].

3) Number of livestock ownership

The average number of livestock ownership respondents is 2. The number of cattle ownership is relatively low because this business is a traditionally managed side business. This is in accordance with the opinion of [19] which states that traditional businesses are represented by farmers with a narrow land that has 1-2 animals.

4) The job of farmer

The main job of the average respondent is as a farm laborer, raising livestock is a side business. According to [20] states that to deal with business risks such as production failures, farmers conduct side businesses as a source of income to meet basic family needs.

B. Analysis of Human Capital

Human capital in this study includes the level of formal education and health level. Human capital in this study is presented in Table I.

TABLE I: HUMAN CAPITAL OF BEEF CATTLE BREEDING BUSINESS IN JERUKSAWIT VILLAGE

Human capital	Tot	Category	Percentage (%)
Education level			
a. Score 1	38	Not good	76
b. Score 2	10	medium	20
c. Score 3	2	Good	4
Healthy level			
a. Score 1	1	Not good	2
b. Score 2	6	medium	12
c. Score 3	43	Good	86

Human capital is defined as the knowledge, information, ideas, expertise and health of an individual [21]. According to [22], human capital is an accumulation of individual talents and knowledge obtained through education, training, experience and cognition. Human capital in this research includes the level of education of farmer and the level of health of farmer.

The education level of farmer is in not good category with a percentage of 76%. Farmer haven't aware of the importance of education for business development to improve the standard of living of farmer. According to [23], education plays an important role in the ability of an economy to adopt modern technology and build a capacity for sustainable growth. Education and training are important factors in the development of human capital. Education and

training can be a plus for a worker to increase work productivity. Higher education allows high income for a worker. Thus, investment in human capital in the field of education is an important factor, because through education will be qualified human capital so that it can provide a multiplier effect and contribute to the economic development of a country.

Human capital in running beef cattle breeding business which is a supporting factor is the health level of the respondents. The level of health that includes physical perfection of the respondents is in good category with the number of respondents as much as 86%, because farmers do not have a history of serious illness or rarely experience pain. Respondents are also included in the category of active workers and include productive age so that activities such as beef cattle breeding business and other activities can run well. [23] states that achieving a person's social value requires high physical health. Health will affect the activity of a person in a family, organization, social environment and activeness in building values and norms in the community. Physical health of beef cattle breeding will affect the development of beef cattle breeding business.

IV. CONCLUSION

The conclusion of this study was the analysis of human capital of beef cattle breeding business based on village breeding centre in Gondangrejo District, Indonesia was the level of formal education in not good category and the level of health in good category.

CONFLICT OF INTEREST

This article about human capital analysis of beef cattle breeding business based on village breeding centre is original that have not been published in other journal. This research is used to determine community empowerment model based on village breeding centre in Gondangrejo Subdistrict, Karanganyar District.

AUTHOR CONTRIBUTIONS

Authors contributions are that the authors had been conducted research to analyze human capital in the beef cattle breeding business in Gondangrejo Subdistrict, Karanganyar District as an effort to determine the strengths and weaknesses of farmers to find a community empowerment model based on Village Breeding Center in accordance with the community conditions.

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