



Development Strategy of Bali Cattle Business Towards Sustainable Rural Economy



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Abstract



Keywords

Bali cattle business;
cattle farmers;
development strategy;
rural economy;
sustainable;

Rural livestock businesses with their characteristics require appropriate and adaptive strategies towards a sustainable rural economy. This study aims to analyze the development strategy of Bali cattle farming towards a sustainable rural economy in Rendang District from internal and external factors. The research was conducted in Rendang District, Karangasem Regency from September to December 2020 using a survey method. The research location was determined by purposive sampling method, used 85 respondents consisting of 80 Bali cattle farmers and 5 experts. The results of the IFE-EFE analysis show that the internal factor's value is 3.09 and the external factor's value is 2.85 which indicates the position of the Bali cattle farm in Rendang District is in quadrant IV in the IE matrix, namely growth and development division. The result showed that ten strategies were found as the development strategy of the Bali cattle business. The strategy of expanding the business development of Bali cattle as beef cattle was the priority towards a sustainable rural economy in the Rendang District.

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1 Introduction

The development of the livestock sector plays a strategic role in the national economy. This strategic role is demonstrated by its role in capital formation, provision of foodstuffs, industrial raw materials, feed and bioenergy, absorbing labor, sources of foreign exchange, and sources of income, as well as environmental preservation through environmentally friendly farming practices. Bali cattle farm for beef cattle is a very potential and strategic livestock subsector commodity. The development of animal husbandry has very good prospects in the future because the demand for materials derived from livestock increases greatly in line with the increase in population, income, and public awareness to consume high nutritious food, as a result of the increase in the level of education and the average income of the population. The Director-General of Animal Husbandry and Animal Health of the Republic of Indonesia reports that the great potential for developing ruminant farms is likely to come from smallholder farms (business scale) because 90% of domestic feeder cattle production is carried out by smallholder breeders. The import of beef to meet market needs is still being carried out because local Indonesian cattle are still unable to produce premium quality meat. The imported meat has several advantages, namely softer, high degree of marbling so that it is very popular with consumers (Priyanto et al., 2015).

The rate of increase in population followed by improvements in the standard of living and changes in consumer tastes has changed consumption patterns leading to animal protein from livestock. Beef is a high-protein food source that is relatively expensive compared to other food sources. Generally, consumption of beef by Indonesians increases when there are celebrations or religious holidays. The amount of beef available is determined by the national demand for beef consumption. The need for beef consumption is determined by the population and beef consumption per capita. In 1996, the level of Indonesian people's beef consumption was 0.704 kg/capita/year and increased to 2.40 kg/capita/year in 2015 (Dirjen PKH, Ministry of Agriculture, 2016).

The development of the volume and value of beef exports in Indonesia in the 1996-2016 period tends to increase. During this period, there was always a large beef trade balance deficit. In 1996, the deficit in Indonesia's beef trade balance was 15,769 tonnes or equivalent to a value of US \$ 32.43 million, increasing to 107,219 tonnes in 2016 or equivalent to a value of US \$ 321,356 million, a tenfold increase in 1996-2016. During 1996-2016, the highest beef imports reached 246,609 tons or the equivalent of US \$ 681,229 million occurred in 2014, this was due to insufficient availability of meat for domestic needs and no exports (Dirjen PKH, Ministry of Agriculture, 2016). Such conditions require stakeholders to immediately implement a national beef cattle development strategy to reduce dependence on imports and gradually and sustainably be self-sufficient in providing national beef needs (Adinata et al., 2012). Indonesia has three patterns of beef cattle development. The first pattern is the development of beef cattle which cannot be separated from the development of agricultural businesses, especially rice fields and fields. The second pattern is that cattle development is not related to agricultural business development. The third pattern is the development of the fattening business (fattening) as a capital-intensive and large-scale business, although the activities are still limited to raising feeder cows to become ready-to-slaughter cattle (Suryana, 2017).

Efforts to achieve beef self-sufficiency have been launched for the period 2000-2010 through various government programs such as the bullying program, the development of artificial insemination technology (IB) but these efforts have not been successful. The failure of meat self-sufficiency is caused by not achieving program targets, the cause is that program policies are not accompanied by detailed operational plans and real activities in the field, small-scale programs are compared to the targets to be achieved, the program implementation strategy is equalized by not prioritizing superior areas, but is oriented towards superior commodities, program implementation makes it impossible to evaluate the impact of the program, and the program does not have an impact on national livestock population growth (Priyanto, 2011). Karangasem Regency has several areas that are very good for increasing the business of raising Bali cattle. Rendang Subdistrict is an area that has the potential to develop Bali cattle breeding business due to its excellent environmental factors, as well as the existence of land and feed which is very supportive of the Bali cattle

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raising business for beef cattle. The productivity of cattle is influenced by genetics, feed, and management. Cows that are raised on people's farms will generally experience a shortage of feed because the amount of feed given is usually not by the needs of the livestock, is of low quality, and breeders rarely provide reinforcing feed such as concentrate (Wiyatna et al., 2012).

The income of farmers is generally influenced by factors of demand and selling price. The price will increase when the demand for a commodity increase, but if the price increases, the demand will decrease. In general, farmers sell adult live cows for Rp. 7,000,000 to IDR 8,500,000 / head. The net income of the cattle business is obtained from the reduction of income with the costs incurred during the production/maintenance process. According to data from the Bali Provincial Animal Husbandry Service (2019), the number of beef cattle in Karangasem Regency is around 124,536 heads so that the population growth rate of cattle raising businesses greatly improves the economy in Karangasem Regency. For this reason, it is necessary to identify alternative patterns of community husbandry development that have an economical scale of business and can contribute to adequate family income. People living in remote areas do not know much about market information for livestock products. Lack of information causes livestock farming to be less developed. Livestock production produced in an area can only be sold in markets in the area concerned as well as in nearby markets (Suresti et al., 2012). In the future perspective, the people's livestock business must lead to support the development of livestock agribusiness, so that it is not only a side business, but also leads to the main business in the family economy. In other words, livestock business the people are expected to be the main source of income for farmers and can contribute to meeting the needs of the breeders' families (Santoso, 1997; Zhou et al., 2013; Ellis-Iversen et al., 2010).

Apart from being motivated by the potential of Karangasem Regency, the increase in cattle imports and local competition has encouraged Bali cattle farms in Karangasem Regency to prepare and seek strategies according to the potential of human resources and the variety of existing natural areas. Bali cattle farms in Karangasem Regency need to be studied further to survive and experience increased production which results in quality beef cattle and meets sustainable development principles. This research is intended to produce a strategy to develop a Bali cattle farming business towards a sustainable rural economy in Rendang District, Karangasem Regency to be able to compete with beef cattle centers in other regions in Indonesia (Priyanto, 2020; Díez & Coelho, 2013).

2 Materials and Methods

The research design used in this study was survey research. The methods used in the implementation of the research are qualitative methods and quantitative methods. Qualitative methods emphasize aspects of in-depth understanding of a problem. While the method quantitative is a measurement method that emphasizes the objective measurement aspects of social phenomena. Quantitative data is data expressed in numbers, and this research is assisted by a questionnaire (Sarwono et al., 2008; Hamidi, 2004). This research was conducted in Rendang District, Karangasem Regency from September to December 2020. The research location was determined by purposive sampling method, with several considerations, namely: a) Karangasem Regency is one of the districts with the largest Bali cattle population in Bali Province. b) Rendang District is one of the districts with the largest number of Bali cattle farm owners in the Karangasem Regency. c) There are farmers in Rendang District who have the most Bali cattle above 10 in Karangasem Regency according to Bali Province Animal Husbandry Data Information Book for 2019. d) Rendang District is supported by the availability of forage. e) Strategic and easily accessible research areas.

This study uses descriptive and analytic methods which are case studies (Sugiyono, 2003; Amerta et al., 2018; Sulistyarningsih, 2016). After the identification stage of opportunities, threats, strengths, and weaknesses which are summarized in the internal and external strategic factors that are in the EFI and EFE matrix then mapped into the IE matrix. To obtain alternative strategies, a SWOT analysis was carried out. Several alternative strategies obtained were then analyzed by QSPM to be used to get the best strategy. Primary data is data obtained directly at the research location, either through interviews or observations. Primary data in this study are the results of interviews regarding the farming process and situation, as well as documentation to support the research results (Lisson et al., 2010; Suardana et al., 2017). Secondary data is data obtained from literature, libraries, government or private agencies, and research reports. The data is in

the form of annual reports, journals, theses, and theses related to this research. Respondents were 80 business actors (owners and managers) of Bali cattle farms with more than 10 cattle in Rendang District, Karangasem Regency. The method used to collect data and information in this study was an interview, observation, data collection, documentation, and literature study (Kinneer & Taylor, 1996).

3 Results and Discussions

1) Age of farmer

Respondent's age is the age at the time the research was carried out which is calculated in units of years and age is one indicator of a person's physical abilities. Someone who has a younger age tends to have stronger physical abilities than those who have an older age. The data shows that 97.5% of the respondents of Bali cattle farmers in the Rendang District are in the productive age range. Only 2.5% of the respondents in the study were outside the productive age limit. The working productive age is based on the Manpower Act Number 13 of 2003 chapter I article 1 paragraph 2, which is the age range between 15 to 64 years.

2) Farmer education level

The level of education of Bali cattle farmer respondents in Rendang District is 100% having received formal education. Based on the level of education, it can be seen that respondent farmer education good. The level of education influences business livestock both technically, in the management and on the management of the livestock business in the absorption of new technology, with a high level of education It is hoped that the breeders will be able to carry out their livestock business activities with better because it is supported by a wider range of knowledge and insights. A person's education level is a reflective indicator of a person's ability to be able to complete a type of work or responsibility. Education is needed in running a business no exception in running livestock farming (Utami, 2015; Liu et al., 2005; Wu et al., 2007).

3) Farmer experience

The experience of raising a person can be seen from a person's long history pursue the field of animal husbandry. The study shows that the respondent farmers Bali cattle in Rendang district, Karangasem regency have experience raising cattle for more than 30 years with the number of respondent farmers 4 people and percentage 5%. Meanwhile, other farmer respondents have experienced between 10-20 years as many as 43 people with a percentage of 53.75%, Farmer respondents have 21-30 years of farming experience 23 people with a percentage of 28.75%, and respondents with farming experience for less than ten years as many as 10 people with a percentage of 12.5%. This shows that the farmer respondents have quite a long farming experience in managing their business, as evidenced by the ability of the farmers in running their livestock business (Mubarak, 2011; Putri, 2014; Wiratna, 2015).

4) Ownership status of livestock

Bali cattle that are kept by farmer respondents are with status own livestock ownership. The results showed that 73.75% of Farmer respondents have 10-13 Bali cattle being kept, meanwhile, 22.5% of farmer respondents own 14-17 Bali cattle being raised and 3.75% of farmer respondents own 18-20 Bali cattle is maintained. This shows that the respondents of Bali cattle farmers in Rendang District, Karangasem Regency has deep business objectives running a Bali cattle farm with total ownership of more than 10 tail (Reihanian et al., 2012; Okafor, 1980).

5) Breeding motives

The main reason for breeders to carry out the Bali cattle business is as the main business of 53 breeders with a proportion of 66%. Another reason is that as a side business or as an additional stage that can be used at any time if the farmer requires high costs in a fast time, there are 27 farmers with a proportion of 34%.

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6) Dependents of the farmers respondent family

Farmer respondents have dependents of a family member different. As many as 76.25% of respondents were farmers in Rendang District have 3-5 people dependents, while 20% of respondents have farmers dependents of 0-2 people, and 3 from all farmer respondents with percentage 3.75% have dependents of more than 5 people. More family members in the farming business will affect the burden shouldered by the peasants, which is indicated by the increasing number of family members the heavier the burden is also obtained (Daniel, 2002).

7) The main job

The majority of farmer respondents have their main job as animal farmers (66.25%). Apart from being an animal farmer, the main occupation of farmer respondents is as farmers (20%), and private employees (13.75%). Based on the result data in the study, it was found that more than 50% of the farmer respondents had the main job as a farmer. This means that farmer respondents at Rendang district, Karangasem regency, has the main job as a farmer, indicating that the respondents of Bali cattle farmers are in Rendang District Karangasem Regency has a business objective in running it Bali cattle business in Bali because it has focused on and made livestock as the main job. Respondents with the main occupation of farmers in plantations, to increase income and maximize the potential of existing land, most of the farmers who have a job as farmers also maintain Bali cattle in the plantation area.

Bali cattle raising management

The livestock sub-sector is very difficult to separate from food crop agriculture because the tradition of farmers who work on agricultural land usually also raises their livestock, especially Bali cattle in Rendang District. Bali cattle population always ranks at the top of the entire population of livestock types in the Rendang District. This shows that Bali cattle are very popular for the people in Rendang District compared to other types of livestock. The potential for Bali cattle feed provision in Rendang District generally comes from grass, leaves from trees, and straw or agricultural waste (Guntoro, 2002; Edwina et al., 2006).

Marketing channel

Marketing of Bali cattle in Rendang District is carried out directly (direct marketing) and indirectly (indirect marketing), according to the presence or absence of marketing agencies involved in distributing Bali cattle from farmers to end consumers. Based on the research results, the Bali cattle marketing system carried out by farmers in Rendang District was 87.5% through intermediaries. This was done because the farmers in Rendang District were too comfortable using the services of belantik who came directly to the farm location and made buying and selling transactions. Belantik in this area buys Bali cattle based on price per head according to the estimated weight/stock of weight (Suarda, 2009; Downey, Ericson, 1997, Limbong, 2017).

The concept of sustainable development

According to the Triangular Framework for the Concept of Sustainable Development, a development activity (including livestock and agribusiness) is declared sustainable, if the activity is economically, ecologically, and socially sustainable (Srageldin, 1996). Economically sustainability means that a development activity must be able to produce economic growth, capital maintenance, and efficient use of resources and investment. Ecologically sustainable means that these activities must be able to maintain the integrity of the ecosystem, maintain the carrying capacity of the environment and conserve natural resources, including biodiversity. Meanwhile, social sustainability requires that a development activity be able to create equitable development results, social mobility, social cohesion, and institutional development. Although there are many variations in the definition of sustainable development, including sustainable agriculture, it is widely accepted that it rests on three pillars: economic, social, and ecological (Munasinghe, 1993). In other words, the concept of sustainable livestock is oriented towards three dimensions of sustainability, namely: the sustainability of economic business (profit), the sustainability of human social life (people), and the sustainability of natural ecology (planet) (Hamzah, 2007; Daniel, 2002; Sumbayak, 2006; Astuti, 2016; Hall, 1998).

Development strategy

Generally, the business development environment consists of an internal environment and an external environment. The internal environment is the environment that exists in the Bali cattle breeding business, including its strengths and weaknesses so that breeders must be able to cover their weaknesses with their strengths which exists. Meanwhile, the external environment is the environment that is outside of business development, which can be an opportunity and a threat to the development of the Bali cattle business in the Rendang District. This analysis of the external environment helps the farmer to take advantage of opportunities in an effective way to deal with external threats. Based on the results of the research that has been done, the results of the analysis of the internal and external environment consisting of strengths, weaknesses, opportunities, and threats in the development of Bali cattle farming in Rendang District (Rangkuti, 2013; Khusna et al., 2013; Soekartawi, 2007; Abdillah, 2015; Akmal, 2006).

The IE matrix shows that the values of IFE and EFE were 2.39 and 3.03 respectively if that the cluster breeding business in the VBC felt in the second cell which was categorized as grew and supervised (Figure 1). According to (David, 2002) the appropriate strategy for the second cell is an intensive strategy (market penetration, market development, and product development) or integrative strategies (backward integration, forward integration, and horizontal integration). This business should evaluate its market approach which has been done so far.

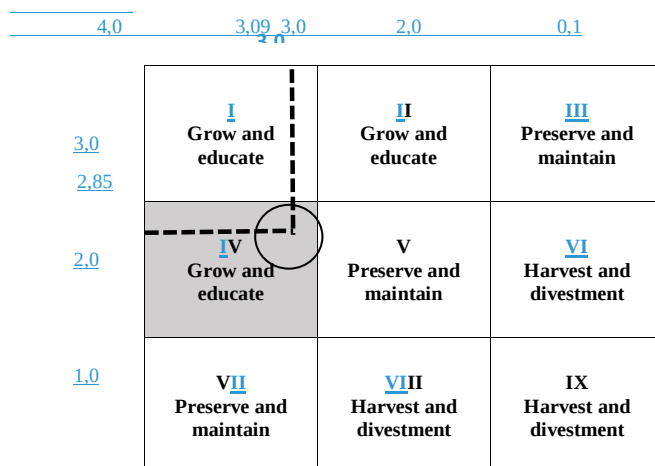


Figure 1. Internal and external matrix

Bali cattle businesses are in industries with rapid market growth. However, farmers cannot enter the market and compete effectively, so that the necessary remediation attempts the market approach and the increasing competitiveness of farmers. Intensive strategy is the main option that can be used to increase the income of farmers and improve the growth and sustainability of the business. The company is located on the second cell can create a strategy that aims to expand the market, production facilities, and technology through internal development and acquisition or joint ventures with other companies in the same industry. Based on the results of the SWOT analysis has been done, it could be formulated ten strategies in the Business of Bali cattle to increase the income of farmers and to towards a rural economy as follows:

1) Expanding the development of Bali Cattle business as beef cattle

The development of the Bali cattle slag business as beef cattle is very important in Rendang District, Karangasem Regency. The existing population limitations, the demand to leave the area is very high, but due to limitations, a strict demand is fulfilled by every trader with large capital. Based on these descriptions, visitors will come to see that in the future they will be livestock that has a wide development space because there is no potential market support based on tracing from the supply and demand sides. To continue to exist as Bali cattle producers, farmers must always increase the quantity and quality of Bali cattle produced through efficient production factors that are technically efficient: the use of a fertilization management system that can increase farmer income resulting in added value (livestock body weight), and shorter and more efficient times with prices, through increased costs to obtain higher product prices.

2) Increase the yield of Bali cattle as beef cattle

One of the marketing of Bali cattle is to improve the quality of Bali cattle products, namely by increasing the existing business scale, by stimulating the production of Bali's calves either from direct tillers or buying tillers from outside the Rendang District area. The advantage of the Rendang District, Karangasem Regency, which is the availability of natural feed, can improve the quality of Bali cattle. So that it can increase the growing weight of Bali cattle quickly and provide benefits for Bali cattle breeders because natural feed does not cost too much. The provision of feed and nutrition to Bali cattle greatly affects the development of Bali cattle that are ready for sale.

3) Developing human resource skills and improving efficiency patterns to master and increase the productivity of the Bali cattle business

The existence of human resources cannot be separated from livestock development. A farmer as a manager is a determining factor in achieving business success. Animal husbandry development efforts cannot be separated from the farmers themselves so that the characteristics need to be known. Human resource development in the business world requires the involvement of the government and other related parties. Personnel development is very important for us to do and has many benefits and one thing that can be done for the livestock business is a training and managerial program in development, besides combining training and capital development for farmers. These exercises and training are intended to improve mastery of various techniques and skills in implementing certain jobs in a relatively short period. Development and training programs will increase farmer productivity. In the long term, changes in HR skills can occur in the form of jumps or shifts, where these changes are caused by changes in the use of technology and production methods.

4) Establishing partnerships with the government and private sector by taking advantage of the kinship of the rural community

The development of the Bali cattle business needs to be supported by institutions at the farmer level and at the institutional level (program coordination) in addition to capital. The development of Bali cattle business produced is closely related to improving human resources by increasing farmers' knowledge, cooperating with various parties to increase productivity, and maintaining consumer confidence in the quality of local products through good production management by collaborating with the government and the private sector by utilizing rural community interactions.

5) Provide information to increase the sales volume of Bali cattle

The lack of information obtained by farmers regarding the methods/methods of developing a Bali cattle business greatly affects business development. Through this, the government can facilitate local breeders in providing information either through printed media or communication by extension agents. Furthermore, the increasing demand for meat in the community affects meeting the needs of local cattle. This is supported by

government policies to limit beef imports. Based on this, breeders are expected to be able to take opportunities by increasing the sales volume of Bali cattle.

6) Carry out a mentoring and extension program accompanied by demonstrations (pilots) to increase the ability of farmers

Assisting and educating farmers to apply appropriate technology in the livestock business, for example in cattle fattening techniques using feed technology, where Bali cattle feed has been processed by the fermentation method so that the feed can be digested directly by the cattle without wasted feed, and all feed can be absorbed by the cattle into the meat so that the cattle's weight increases. This is of course with assistance and piloting so that farmers can immediately see and practice the information obtained.

7) Develop Bali cattle farm based on local livestock resources

The high dependence on imported livestock products and raw materials for the livestock industry is a challenge, as well as a very good opportunity to revitalize livestock through the development of the local resource-based livestock industry. The development of livestock in the future is not only increasing production but also must be able to improve the welfare of farmers. This can be realized if there are policies that are conducive and in favor of farmers, and are supported by the application of appropriate innovative technology. The development of cattle breeding must rely on the genetic resources of local cattle.

8) Creating a conducive situation in the marketing of Bali cattle

The marketing techniques that are applied are of course different due to the different economic conditions of the community. The use of strategies in the marketing sector is to create conducive and stable marketing conditions to have a positive impact on the parties involved in the marketing process (both producers and consumers). The farmer marketing strategy can be carried out using breeders or related institutions to promote excellence to influence and introduce livestock according to customer needs through an exchange process with the principle of customer satisfaction, which is carried out continuously and continuously. The marketing objective is to give customers confidence in the quality of livestock so that this will create customer loyalty to the livestock business.

9) Develop an information system for the development of Bali cattle

The information system obtained about the Bali cattle business in Rendang District is not yet optimal. Lack of information obtained by farmers related to methods/methods of developing a Bali cattle business. Most of the farmers do not get information about livestock raising, feed management, and all information about business development from the government, some farmers receive information through online media and other farmers or by word of mouth. The communication system is still carried out through individuals. This requires the formulation of an information system strategy regarding the development of livestock businesses so that they can be implemented optimally.

10) Fostering or collaborating with other institutions for the development of Bali cattle business as beef cattle

The marketing system still depends on Dutch and the price of cattle is determined by the market (the farmer is the price taker). This encourages the implementation of cooperation with other institutions to improve limited facilities and marketing accessibility, not being able to meet the continuity of product availability and the limitations of breeders in increasing the scale of their livestock business.

Strategy recommendations

Based on the results of the QSPM analysis, priority strategies that will be implemented and the most appropriate are expanding the development of the Bali cattle business as beef cattle. This result is by the results of the SWOT strategy where the SO strategy has the highest score among other strategies, one ST strategy is to establish a partnership business with the government and the private sector by utilizing family-friendly rural community interactions with a score of 1.52. QSPM matrix calculations with the three most priority strategies (Mubarak, 2012; Dewi, 2018; Utami, 2015; Iskandar & Arfa'i, 2007; Edwina & Cepriadi, 2016).

4 Conclusion

- 1) The factors that influence the development of the beef cattle business are internal strength consisting of Bali cattle, native Indonesian cattle germplasm, availability of sufficient animal feed sources. Bali cattle business activities have become a culture in the community, availability. The land source for raising livestock is sufficient, and Bali cattle are resistant to extreme environments while the internal weaknesses are lack of information and communication, traditional marketing, limited marketing, unable to meet the continuity of product availability, and the limitations of breeders in increasing the scale of Bali cattle farming. External opportunities are increased demand for beef, increased demand for local cattle, high local government support, while external threats include the entry of foreign cattle traders, foreign investors with high enough capital, and the economic condition of the community. The total score for internal factors was 3.09 and the total score for external factors was 2.85. This shows that the development of the beef cattle business in Rendang District, Karangasem Regency is in a position of growth and development.
- 2) From the results of the SWOT analysis, 10 alternative strategies were obtained for the development of the Bali cattle business, and with the results of the QSPM analysis, priority strategies are obtained for the development of the Bali cattle business and increasing farmer income so that it can lead to a sustainable rural economy, namely expanding the development of Bali cattle business as beef cattle.

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