

Level business competitiveness of beef cattle fattening in smallholder farms

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Abstract

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This study aimed to determine the level of competitiveness of cattle fattening in the farms of the people. The study was conducted in the Bone regency, South Sulawesi province, Indonesia. We used questioners' survey to 51 people who run fattening beef cattle businesses from September until December 2015. The data were analyzed using policy analysis matrix. The results showed that the business has a competitive advantage private cost ratio = 0.97, a comparative advantage domestic resource cost ratio = 0.96 and the private profit in EUR rates = 11.15 and social profit in EUR rates = 13.34. The conclusion of this research was the cattle fattening in Bone regency had low competitiveness.

Keywords: beef cattle; business; competitiveness; fattening

Introduction

In line with population growth and increased revenue in Indonesian society, the demand for products from livestock, especially beef, has also increased. It was characterized by the trend of the increased consumption of meat in Indonesia, which is illustrated by the increase in the rate of cattle slaughter in the last five years. Beef cattle fattening has a bright future because some Association of Southeast Asian Nations (ASEAN) countries like more beef from Indonesia nowadays. Policy development of beef cattle business has a basic correlation and synergistic relationship with agriculture, especially food crops, with agricultural waste given as the raw material or feed of the cattle business (Mariyono & Rasyid, 2010; Sirajuddin et al, 2019)

Livestock, as one of the agricultural sub-sectors, has played an integral part in the success of the sector in Indonesia. The vision of agricultural development was a cultured livestock industry by the industrial base productivity and sus-

tainable. The future of agriculture is faced with the fundamental change because of the changes to the global economy, the development of biological technology, various international agreements, product demand, product packaging and environmental sustainability. Concretely, Indonesia livestock will compete with the livestock of other countries, not only with the aim of seizing the international market, but also the domestic market in Indonesia. A research by Sarma et al. (2014) shows that the main problems farmers face are the high cost of inadequate credit facilities, disease attacks, illegal use of human medicines for fattening cattle, price fluctuations and inadequate extension. In order to achieve these development goals, studied by Sirajuddin et al. (2016) have been directed towards developing more advanced livestock with focus on production centers, which require development in certain areas, using appropriate technology and the implementation of a new runway, efficiency, productivity and sustainability.

In addition to producing meat, by-products needed by society, like manure, skin, bone and so on, can provide an addi-

tional income. Feces have economic value because it includes the organic fertilizer needed by all kinds of plants. Feces can be a source of nutrients that can improve soil structure so it becomes looser and more fertile; therefore, fattening cattle is considered to provide maximum profit. However, it is necessary to increase the production and productivity of the cattle population to stimulate the development and success of beef cattle breeding and preparing livestock resources in the future (Sirajuddin et al., 2016).

The livestock product that is the government's priority right now is meat. Meat is a source of animal food needed by people, along with eggs and milk. The need for meat in Indonesia itself is filled with beef. The government has established beef as one of the commodities that are expected to achieve self-sufficiency to support national food security. However, at present, domestic beef production is only able to meet about 64% of the national needs (Soedjana, 2011; Sirajuddin et al, 2019). This forced the government to issue a policy regarding the import of beef for the purpose of meat consumption in Indonesia.

Imports of meat and cattle were initially intended only to support and connect the need for cattle, which continues to increase. However, in some areas, it turns out that imported meat and cattle would potentially disrupt the local beef agribusiness business. The meat, offal, and beef imports are relatively cheaper because the management of cultivation and management of the source of cattle production in the exporting country are very efficient compared to the management used in Indonesia (Mandasini, 2016).

The demand for meat is met by imports because it is not offset by domestic production. The growing dependence on imported beef, triggering fluctuations in uncontrolled beef prices, has the potential to increase inflation and encourage the rise in the prices of other livestock. Ironically, the increase in beef prices is not enjoyed by farmers and can negatively impact less passionate breeders, preventing the development of their beef cattle business (Ilham, 2009). This phenomenon gives an idea of the low competitiveness of local beef and cattle in Indonesia. One of the areas in South Sulawesi province that has the largest population of beef cattle that can be developed to increase production and productivity, which has implications for competitiveness, is Bone regency. Therefore, it is necessary to determine the competitiveness of fostering business in the people's farms in Bone regency.

Material and Methods

This research used a quantitative approach. The focus of this research was to reveal the competitiveness of fattening

beef cattle businesses in the community farm in Bone Regency. This research used a survey research method, which samples were taken from a population with questionnaires which were then used as a tool for collecting data (Morissan, 2012). In the context of survey research, reliable and valid data and facts were required, using approaches such as observation techniques, and interviews through questionnaires.

This research was conducted in the Bone regency, selected because Bone regency has the largest population of beef cattle in South Sulawesi province, with a total of 259.487 people (Central Bureau of Statistic of South Sulawesi Province, 2013). Data collection was performed in the period September-December 2015. The population in this research included all breeders who run fattening beef cattle businesses. The population in Bone regency was 514 people, so the sample included 10% of the population. The number of samples used in this study was 51 people. Determination of the number of samples and data collection techniques in this study was based on Pearson et al. (2005), who stated that the data taken for policy analysis matrix (PAM) can be from examples that are not too large, both in terms of breeders, and business actors, since the data entered in PAM was a mode. Parameters were estimated through models with statistically valid instances.

This research aimed to gather more information both in terms of aspect and depth, compared to the number of breeders interviewed. A common approach used to measure the competitiveness of a commodity was the level of profit generated and efficiency. The analysis method used in this research was the PAM method. According to Monke and Pearson (1989), the PAM or policy matrix was used to analyze the effect of government intervention and competitiveness on commodity systems. The commodity system that can be influenced includes four activities, namely the level of farming (farm production), the delivery of animals for processing, processing, and marketing.

Results and Discussion

Analysis of business competitiveness of fattening beef cattle on smallholder farms

The policy analysis matrix fattening beef cattle business in Bone regency is shown in Table 1, the results of the PAM analysis show the gains obtained; the private profit in Euro rates is 11.15, greater than one, while the social profit in EUR is 13.34.

Competitive advantage

The ratio analysis model PAM beef cattle fattening Bone regency of South Sulawesi can be seen in Table 2. It was

Table 1. The policy analysis matrix fattening beef cattle business in Bone Regency

Component	Revenue (EUR/Head)	Input cost (EUR/Head)		Profit (EUR/Head)
		Input tradable	Domestic	
Private prices	711.03	386.58	313.30	11.15
Social prices	665.51	340.60	311.57	13.34
Divergences	45.52	45.98	1.73	-2.19

Source: Primary data and secondary data after being processed

shown that the private profit PCR obtained by farmers has a positive value in EUR is 11.15 each cow. While social profit Domestic Resource Cost Ratio (DRCR) in the absence of the policy ranchers can operate fattening cattle business in Bone District in EUR is 13.34 each cow.

Table 2. Ratio analysis model PAM beef cattle fattening Bone Regency of South Sulawesi

Indicator	Value
Private profit (EUR)	11.15
Social profit (EUR)	13.34
Transfer output (EUR)	45.52
Transfer input (EUR)	45.98
Transfer factor (EUR)	1.73
Net transfer (EUR)	-2.19
Private cost ratio	0.97
Domestic resource cost ratio	0.96
Nominal protection coefficient on output	1.07
Nominal protection coefficient on input	1.14
Effective protection coefficient	1.00
Profitability coefficient	0.84
Subsidy ratio to producer	0.00

Business competitiveness of fattening beef cattle on smallholder farms

Private profits greater than one indicates that the beef cattle fattening business in Bone regency is feasible to develop. This means that the income obtained by farmers is greater than the cost incurred, which results in the occurrence of divergences. One of the causes of divergence is a distorted government policy. The application of distorted policies to achieve non-efficient objectives will inhibit the efficient allocation of resources and will inevitably lead to divergences.

Private profit (financial) is an indicator of the competitive advantage of a commodity system based on technology, output value, input cost and policy transfer, while social benefits indicate the comparative advantage of a commodity in the utilization of scarce resources in the country. In this condition, input and output prices are calculated under perfectly competitive conditions, where all forms of subsidies and market-distorting protections have been eliminated.

Based on the value of Private Cost Ratio (PCR), it can be said that beef cattle commodities are financially efficient (private profits) and have a competitive advantage because producing a unit of added value at private prices requires less than one unit of domestic input. The smaller the value of PCR obtained, the higher the level of financial efficiency and competitive advantage possessed.

Competitive advantage

The private profit PCR obtained by farmers has a positive value which means that the farmers who run the beef cattle fattening business make a profit. The value of private profits greater than zero indicates that the business of fattening beef cattle to produce beef is profitable in private. This is due to the difference in the selling price of local cattle and imported cattle not being too large. Thus, Indonesian local cattle products can compete with imported products. The value of social benefits in the study sites that are greater than zero (positive) can be explained as the business of beef cattle in the research location can generate profit without any interference from the government, even though it only yields a relatively small profit.

The value of private cost ratio is an indicator that attempts to demonstrate a competitive advantage obtained by farmers showing a value of less than 1 (0.97) and is thus based on the theory that beef cattle in Bone have a weak/low competitive advantage. It also means that the added value of the output of one unit at the market price/private in the beef cattle research location is required in addition to Domestic resource cost ratio (DRCR). Beef cattle farming in Bone district have competitive advantages and very small financial benefits. This shows that this business can be run and remain profitable. This is in line with the opinion of Ilham (2009) who mentioned that, from the literature search on the results of research in the field of farming, declared financially, beef cattle businesses in Indonesia are profitable and deserve to be developed.

Comparative advantage

Comparative advantages and economic efficiency levels of beef cattle fattening businesses are shown by DRCR

values, which is the ratio between domestic cost and added value at a social price. The DRCR value shows the ability of the production system of the beef cattle fattening business to finance its domestic factors at social prices, or in other words indicates a number of domestic resources that can be saved to produce a single unit of foreign exchange. The DRCR value means that to produce one unit of added value requires 0.96 units of domestic input cost at its social price.

The value of DRCR in Bone regency indicates that to produce or conserve one value-added output in Bone district requires a larger cost (less money saved). Although the results show better self-indulgence, the fact is that Indonesia still has to import beef cattle because domestic demand is only able to meet 60-70% of the national demand, while the shortage must be imported mainly from Australia and New Zealand.

The value of DRCR in beef cattle fattening is greater than the PCR value ($DRCR < PCR$), indicating that there is no demonstration of government policy that provides incentives or protection against producers or beef cattle ranchers. Other government policies can be seen from the restrictions on a number of imports of beef cattle and the application of the criteria for imported cattle; for example, cattle body weight should not exceed 350 kg, and the regulation of live cattle import into Indonesia should come from a country free from main transmitted animal diseases and dangerous zoonotic diseases. Although existing government policies provide incentives or support to farmers, the support is diminishing. Based on research results, Achmad (2013) found that the comparative advantage or value of DRCR for beef cattle businesses in South Sulawesi is 0.72-0.88. This is predicted to be caused by the decreasing government policy protecting farmers. The decreasing government protection for farmers is seen from the decreasing import tariff on beef cattle, which is now abolished. Meanwhile, according to Rouf et al. (2014) the improvement of competitiveness, the formulation and implementing of livestock sector policy should be considered as an integrated system from upstream to downstream, so that there is expected better coordination and synergy between stakeholders and economic actors.

The impact of government policies on beef cattle output is relatively good, due to the high demand for beef, where (1) the population is increasing, (2) economic improvement/income has occurred, and (3) there is an improvement in the quality of life and public awareness of the need for animal protein. The good indicators of the impact of our government policy on outputs, not government policies directly, but indirect policies, such as wage increases (Achmad, 2013).

Impact of government policy

Nominal Protection Coefficient on Input (NPCI) is the ratio between the tradable input cost based on private prices and tradable input cost based on social prices. The value of NPCI obtained was 1.14, which means that the government increased the price of tradable inputs in the domestic market faced by the people farmers below world prices. The value of $NPCI > 1$ indicates the existence of government protection against tradable input producers in the domestic market. Producers still have an incentive to produce despite having to pay input prices that tend to be larger than they should pay ($NPCI > 1$). The higher domestic demand for beef, when production has not been able to meet domestic demand, causes about 30-40% of beef to be imported. Precise growth in beef and cattle imports suggests that the growth of domestic beef production is incapable of following the national growth in beef consumption. The import of beef and cattle at this time can actually hamper the development of local beef cattle. Beef imports continue to increase; initially, this was only to meet the demand of hotels and restaurants, followed by entry into the traditional market in Jakarta, Bogor, Depok, Tangerang and Bekasi. Even now, imported beef has entered traditional markets in West Java, Central Java, Lampung, Bengkulu, North Sumatra, and Aceh. The impact of livestock and beef imports has been felt in the main production centers in East Nusa Tenggara, West Nusa Tenggara and Sulawesi (Indrayani, 2011).

Factor Transfer (FT) value is the social price difference from the private price received by the beef farmers in Bone regarding the payment of domestic production factors. The FT value in this study was negative, indicating that domestic input prices incurred at the private price level were lower than the domestic costs incurred at the social price level.

The Net Transfer value (NT) is the difference between the net gain that the producer actually receives and the net social gain. The value of PC for beef cattle fattening in Bone regency is 0.84, which indicates that the overall government policy does not have an impact on the breeder of beef cattle fattening business, where PC values < 1 .

The ratio of producer subsidy is an indicator that shows the addition and decrease of the acceptance of a commodity because of government policy. The Subsidy Ratio to Producers (SRP) value for beef cattle fattening in Bone regency is positive. This shows that the current policy does not affect beef cattle fattening farmers.

Conclusions

The conclusion of this study is that the business of fattening beef cattle in Bone regency has a weak/low competi-

tiveness; it is shown that the business has a competitive advantage (PCR = 0.97) and a comparative advantage DRC = 0.96, the private profit in EUR is 11.15 and social profit in EUR is 13.34.

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