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Beef cattle farming characteristic to formal financing access

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Abstract
This study investigates the effect of beef cattle farmers and farm characteristics on access to formal financing. This study has been made in subject or area of economy of agriculture especially beef cattle farming. Data were collected using survey approach and questionnaires. The statistical analyses include descriptive e statistics and logit model estimation using STATA. The results indicate that farmers and farm characteristics influence financial accessibility in beef cattle farmers. Education affects the accessibility of financing as a facilitator of the farmers in the search for information, making financing proposals and regarding the ability to convince formal financial institutions.

Keywords: agriculture, breeding animal, economy, financial institution, managerial competence

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INTRODUCTION

The development of a beef cattle breeding business requires attention because it contributes to the fulfillment of beef needs for the community which has a tendency to increase. Nationally, the consumption of fresh meat per capita in 2013 of 4.693 kg increased by 6.65% to 5.005 kg in 2014 (Khan & Hussain, 2011). The level of meat consumption is predicted to increase as the population of Indonesia increases. This indicates that the livestock sub-sector, especially beef cattle farming as the main producer of meat, has a considerable chance of development in the future.

One of the obstacles that are still faced by beef cattle ranchers is minimal capital owned, which is the capital needed to finance business activities. Based on these conditions, the government has provided a lot of financing assistance for the development of beef cattle breeding businesses to date. In addition to the government, banks have also provided business loans and credit programs to assist with the development of livestock businesses.

Although there has been considerable help from the government and banks, there are still many farmers who have not accessed financing. Formal financing institutions including the government and banks still detail some requirements that must be met by farmers, although these have been made relatively easier. The results of previous research (Asnawi *et al.,* 2014) show that the farmers' access to finance, especially from formal financing, is still relatively low. Furthermore, it is identified that relationships, availability of information, proposal procedures for credit, and compassion must be fulfilled, along with location constraints, are becoming obstacles for farmers in accessing finance (Asnawi, 2013). Factors that have hampered access to finance have been described in previous studies as barriers to credit proposal procedures, collateral constraints in accessing financing, relationships and the location of the business (Fatoki & Odeyemi, 2010).

On the other hand the banks still take some things into consideration when selecting prospective borrowers who are known to have certain characteristics: Character or the nature of the debtor, both in private and in the business environment, to determine the extent to which the debtor is willing to fulfill their obligations (willingness to pay) in accordance with the established agreement; Capacity, which is the ability of prospective borrowers running a business to earn profits and to know or measure the ability to return or repay debts (ability to pay) in a timely manner; Capital, or the amount of funds/personal capital owned by prospective borrowers; Collateral, which is goods which the debtor submits as collateral to the credit it receives; and Condition of the economy, which describes the political, social, economic, and cultural situation and the conditions affecting the future business of the debtor (Rivai *et al.*, 2007).

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Accessibility of breeder financing is closely related to the ability to run a livestock business because it determines the capability of the breeder to repay debts (ability to pay) in a timely manner and in the number of installments determined. Business characteristics and characteristics of business managers impact on access to debt financing for SMEs (Fatoki & Asah, 2011) Characteristics of the business owned by the farmers include: 1) the number of livestock owned; 2) old farming businesses, as according to (Le & Nguyen, 2009), it is difficult for emerging small and medium enterprises to access bank financing; 3) the location of the financing institution (Berger & Udell, 2002); and 4) collateral (Bougheas *et al.*, 2005) as it is contended that collateral is an important factor for SMEs in order to access debt finance.

In addition to business characteristics, the characteristics of business managers or breeders also affect the access to debt financing, including age, length of education, livestock experience, and relationship with banks. A previous study (Khan & Hussain, 2011) found that a lack of managerial experience, skills and personal qualities is cited as the main reason why SMEs fail in South Africa. Another study points out that a lack of education and training can occur. Any long-standing relationship between a bank and SME owners conveys an advantage in the case of bank credit, as SMEs with a close banking relationship use less debt in their financing. It has been reported that the closer the relationship, the higher the level of accessibility attained in the form of credit support obtained by breeders (Asnawi *et al.*, 2014).

This study is important because there has been no research examining the effect of breeder characteristics and business characteristics on the capability of farmers to access financing in formal institution financing, either via banking or from the government.

MATERIALS AND METHODS

This study was conducted in Bone Regency, South Sulawesi, Indonesia. This was chosen because South Sulawesi is one of the centers of beef cattle development in Indonesia and the Bone district is the area with the largest livestock population; also, the credit distribution for beef cattle development is high. A total of 88 breeders were interviewed to obtain the required information. Data were collected using survey approach and questionnaires. Respondents were chosen by using a simple random sampling method according Sugiyono (1997).

Characteristics of breeders include age, education, and breeding experience. Education is seen from how long education formal that farmer received. Livestock experience is measured by how long the breeder has kept livestock. Characteristics of business include the length of business farming, business scale, collateral, and location. Business length is measured by the length of time that the cattle farm has been run by farmer (years). Business scale is measured by the number of cattle (tail) owned. The collateral is measured by the presence or absence of collateral owned by the breeder: if any, then the value equal to 1; if not, the value equal to 0. Location shown the ease in accessing the source of financing from the breeder location. The accessibility of financing is measured by the existence of farmers getting loans from banks or via government assistance: if ever, then the value given = 1, while if not, the value given = 0. Data were analyzed using descriptive statistical analysis and the logit regression model estimation using STATA.

RESULTS AND DISCUSSION

Beef cattle farmer characteristics

The data show that the breeders are aged 29-70 years, with an average of 44 years. This indicates that the average breeder is categorized as productive age, thus supporting the livestock business to ensure that it can grow and run well. The age range is very suitable for beef cattle farming businesses because it requires work with physical strength for taking care of the livestock. In addition, every day the farmer must take animals to forage for grass, grazing and so forth.

The duration of education of breeders is 5-15 years, with an average of 10 years. It means that average of higher education level is high school level, are very supportive in adopting the technology, are able to understand the requirements set out by formal financial institutions and often seek information related to sources and types of financing that can be accessed.

Average livestock experience is more than 10 years, with some even reporting more than 30 years. This shows that farmers are experienced and skilled enough to manage their farms and are able to solve technical maintenance problems. The longer they work in this venture, the greater their experience, meaning that the business will run well. This experience is obtained from their parents or because they follow other families; some of them have even been cattle herders since childhood. The longer the breeders cultivate their livestock business, the more their knowledge and skills will increase, which supports the success of beef cattle farming businesses in the region.

Table 1. Characteristics of beef cattle business

Farmer characteristic	Definition	Mean	Min	Max
Age	Farmers age (years)	44.25	29	70
Education	The length of formal study (years)	10	5	15
Experience	Farm experience (years)	13	2	30

Beef cattle farm characteristics

The length of business life is the average time required for the farm business from the beginning until

Table 2. Description of beef cattle business characteristics

Farm characteristic	Definition	Mean	Min	Max
Farm age	Farm age (years)	15.00	5	31
Farm scale	Cattle number (tail)	5.00	2	36
Collateral	1 if have collateral 0 = otherwise	0.59	0	1
Location	1 = 100 km and DA*, 2 = >50 km and DA*, 3 = 25-50 km and DA*, 4 = 25-50 km and EA**, 5 = <25 km and EA**	3.00	1	5

Source: Processed results data, 2016.
*= Difficult to access; **= Easy to access

now. Livestock farming is not always in line with farming experience because farming businesses could have been run by parents or other family members, but the farmer has been directly involved in raising livestock. The average length of beef cattle farming businesses is 15 years, with a minimum of 5 years and a maximum of 31 years. Livestock businesses are largely a hereditary activity, from parents or other family members since childhood, so they are familiar to general breeders. These conditions can certainly support the business feasibility assessment that is performed at the time of submission of credit applications in banking institutions. The duration of the business can illustrate the consistency and diligence of farmers in running their livestock business.

For business scale, the number of cattle owned varies from 2 to 36 cattle, with an average 2-5 cattle per person. The low livestock ownership is due to the limited amount of capital and is also caused by the inability of individual breeders to raise their own livestock in large numbers. This is because many family members that continue their education in Makassar city. While farmers who own large numbers of cattle are partially self-cultivated, some are given to other breeders to be maintained, which means that there will then be profit sharing. The practice has long been developed in rural communities where there are farmers who have large numbers of livestock but are constrained on the energy, land and time to maintain then (Sirajuddin et al., 2015).

Based on the study, there is some information related to the cattle breeders. First, Livestock were kept with the purpose of saving for family members, especially for children to the continue education and finance their wedding. Second, as a precautionary motive, to anticipate if funds are suddenly required. Third, speculation motive, to anticipate the rise in cattle prices, especially ahead of religious holidays. The last, regarding social status, as the more cattle are owned by an individual, then the higher their social status in rural areas.

From the collateral aspect, it is one of the characteristics of the business which is also an obstacle for farmers when attempting to access financing from formal institutions. Generally, farmers do not have collateral required by banks. Breeders who have collateral are farmers who are financially quite capable and the scale of their business is very large.

Regarding location, the issue is still accessing financing, even when the distance is not too far. This is because of the road conditions and the lack of land transportation. However, a few individuals stated that the location of formal financial institutions is easily accessible, even though the distance is far because institutions are often supported by relatively good road infrastructure; therefore, distance is not a problem for some farmers. The availability of increasingly inexpensive modes of transportation supports remote location constraints in rural areas.

Effect of beef cattle farmers characteristic on access to formal financing

Access to financing in this study enables farmers to obtain loans from formal financial institutions in the form of program loans and business loans. Apart from banking, access to financing can also be sourced from grants and government assistance.

If breeders can access formal financing then it is measured by dummy variables: if breeders are able to access financing, the value = 1, and if not, the value = 0. From STATA, the results obtained were a Sig. Model value of 0.000 <0.05%. This indicates that breeder characteristics including age, education and livestock experience affect the accessibility of formal financing, which means that the model should be accepted. Partially, education and livestock experiences are significant in influencing the access to financing.

The longer the education of farmers, the greater the opportunity to access financing from formal institutions, with an increase of 0.26%. This is because education is very supportive of a person's ability to understand the procedures and requirements of credit agreements. In addition, a person's education also affects their ability to provide explanations and information about cattle ranch runs to lenders, which will facilitate the selection process for prospective borrowers. This is in accordance with the findings of (Akram & Hussain, 2008) which explained that the education of farmers is one of the factors that affect the demand for credit, both formal and informal forms.

Unlike the case of breeding, experience, although significant, has shown a negative correlation. This means that increasingly long breeding experience is not related to the accessibility of financing and vice versa. This is because the capacity of the business (capacity) is one of the considerations of financing institutions and is not necessarily owned by farmers who have more livestock experience. Instead, it is determined by diligence, hard work, and tenacity in running his farm business.

Effect of farm characteristic on access to formal financing

Based on the result of data analysis using STATA (0.000<0.05%). This indicates that business characteristics including length of business, business scale, collateral, and location have an effect on the accessibility of formal financing which means that the model deserves to be accepted. A previous study (Behr *et al.*, 2011) explained that in addition to the level of education, farmer experience, farm size, number of visits to financing sources, and distance also affect the demand for credit.

The value of correlation between business scale and collateral was positive. This means that the greater the number of livestock kept, the greater the opportunity to obtain financing. This can be explained as the capacity of the business (capacity), or livestock owned by the breeder, indicates that they are good. In addition, large numbers of livestock will show that the ownership of capital will also be greater. Both of these things will certainly provide a positive assessment for the lender, so it is reasonable that the scale of the business will affect the ability of farmers to obtain loans.

Similarly, the greater the value of collateral owned by the breeder, the greater the loan value that can be received. Regarding collateral, some breeders have this, but most have none of the collateral required by formal financing sources when hoping for credit. Farmers who obtain external financing and are not constrained by collateral are generally incorporated into one of the farmer groups in their area. Banking institutions will usually assess the collateral owned by the group rather than that of individuals. Therefore, although owned by one member of a livestock farming group, collateral can be used by an individual so that the constraints can be overcome. It is therefore clear that collateral is an important factor when accessing financing (Boot, 2000).

For the old factor of business, its correlation value (-0.1570999) means that the length of livestock business does not always guarantee the ability to access financing. This is because livestock businesses are largely run as a hereditary activity from parents or other family members.

It is shown the location of a breeder affects the ability to access financing from a financial institution. The closer and more accessible the breeder is, the greater their ability to access financing. This is indicated by the result of data analysis with correlation (-0.2876338). The distance from the farmer's domicile to the formal financial institution is one of the factors influencing credit activities of farmers. The demand for credit proposed to formal institutions has a negative correlation with the distance between the domicile and the said funding resources. The distance between the location and the domicile is one of the factors causing constraints for breeders when accessing funding (Khan & Hussain, 2011).

CONCLUSION

The characteristics of breeders cover age, education and farming experience, as well as the characteristics of livestock businesses such as farm age, farm scale, collateral, and location; these all affect the accessibility of financing from financial institutions to farmers. The results of this study are expected to be an input for the government when taking financing policies regarding the beef cattle business. Breeders need to improve their capability through training, counseling and other socialization activities related to the financing of beef cattle breeding businesses.

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