STUDY OF ASSOCIATION BETWEEN SOCIO-ECONOMIC FACTOR AND INCOME OF GOAT FARM IN MAJENE REGENCY

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Abstract- To meet the needs of goat meat consumption in the country, it is still need to import about 500 thousand tons of lamb or equal to 10,000 head / year. This is related to the increasing of population in Indonesia every year, where in 2010 has reached 235 million and predicted to reach 273 million people in 2025. This increase related to rising incomes, awareness of nutrition, urbanization and changes in diet. Changes in diet patterns, especially for young goat meat eating from an enlargement increased in the last 5 years, especially in big cities in eastern Indonesia. Therefore, goat farm business is still very promising in terms of the economy. On the other hand, for some people still think goat farm as a side (part time) business that the management can simply be effective if it is conducted on a small scale and assesed unfavorable that can increase farmer income.

This study aims to recognize the relationship between several socio-economic factors and income of goat farmers. Survey method was applied in this study. Survey was conducted in Banggai sub district, Majene regency of West Sulawesi province. Fifty goat farmers were chosen as respondents. Multiple linear regression model was used to analyze socio-economic factors predicted to associate with income of goat farmer. The identification showed that the number of labor force in the family, extensive land ownership, the number of goats ownership, contribution of income to goat farming business toward income of goat farming business overall and cost of goat breeding related significantly to income goat farming business.

Keywords- Social Economy, Income, Goat.

I. INTRODUCTION

To meet the needs of food and nutrition, especially the needs of animal protein derived from meat, it is necessary to develop farming sector as one of parts of comprehensive agricultural development. Marketing opportunities of farming sub-sector are still available any time and increase every year which is related to population growth and community nutritional needs enhacement

One of farm commodities that greatly contributed to the community nutrition is goat. Goat farm is one of small ruminants which has very high benefits for humans, besides as meat producer, goat has other benefit too, such as producer of leather, milk and feces as high quality organic fertilizer.

Besides getting economic benefits from goat farming business, goat breeder has own advantages too, in term of breeding. Goat farm is different from other animals that have difficulty in breeding such as need for capital, breeding system and possibility of disease. Goat breeding does not need high capital compared to broiler chicken and cows farm and cows, because of simple breeding system and resistant to disease. Based on the fact, many people conduct goat farming business to increase their income. Generally, goat farming still apply tradional methods and side business, namely goat breeding without doing good breeding such as goat cage which meet technical and economical requirements, feeding in accordance with nutrition standards and need of goats ad so forth. To meet the needs of goat meat consumption in the country, governmnet need to import about 500 thousand tons of lamb or equal to 10,000 head / year. This is related to the increasing of population in Indonesia every year, where in 2010 has reached 235 million and predicted to reach 273 million people in 2025. This increase related to rising incomes, awareness of nutrition, urbanization and changes in diet.

Diet patterns changing, especially young goat eating meat from an enlargement increased the last 5 years, especially in big cities in eastern Indonesia. Therefore, goat breeding business is still very promising in terms of the economy, on the other hand for some people still think goat farm as a sideline business that activities can only be effective if done on a small scale and rated unfavorable to increase farmer income This study aims to recognize the relationship between several socio-economic factors such as number of labor force, extensive land ownership, goat ownership, contribution of income to goat farming business toward income of goat farming business overall and cost of goat breeding with farmers's income of goat farming business.

II. RESEARCH METHOD

This study was conducted from April to May, 2015 in Banggai sub district of Majene regency. This was explanatory research which aim to recoginze the influence of the independent and dependent variables.

The population in this study are all farmers of the goat farm in Banggai sub district of Majene that

number 150 people. The number of sample was 50 people chosen by the Slovin formula. Data collection was conducted by interviewing and using questionnaire that have been prepared. The data used in this research was quantitative data namely number of labor force, extensive land ownership, goat ownership, contribution of income to goat farming business, cost of goat breeding and income of goat farming business. Data sources consits of primary and secondary data. Primaty data obtained from directly interview with goat breeders by using structured questionnaire, and secondary data from relevant institutions. Data analysis using Multiple Linear Regression where:

$Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + e$ (Sugiyono, 2004).

Y = Income of goat farming
a = Constants
b_1, b_2, b_3, b_4, b_5 = Variable Regression coefficients X1 and X2
X_1 = number of labor force
X_2 = extensive land ownership
X_3 = the number of goat ownership
X_4 = income contribution of goat farming business
X_5 = cost of goat breeding
e = Standart Error

III. RESULT AND DISCUSSION

Association between socio- economic factor and income of goat farming business in Majene regency

To analyze the relationship between socio-economic factors and income of goat farming business in Banggai sub district Majene regency, it is used multiple linear regression analysis with SPSS program for windows. Variables in this study were independent and dependent variable. Independent variable such as the number of labor force (X1), extensive land ownership (X2), the number of goat ownership (X3), income contribution of goat farming business (X4), cost of goat breeding (X5). Meanwhile, dependent variable was income of goat farming business (Y). The results of multiple linear regression analysis were presented in Table 1.

Table 1. Results of Multiple Linear Regression Analysis between Socio-economic Factors and income of foat farming business in Banggai sub district, Majene regency

Independent Variable	Dependent variable	Regression coefficient (B)	$t_{statistic}$	Sig	Note
constants	Income of goat farming	14,736	10,406	0,000	
(X1)	business (Y)	0,248	3,652	0,001	Significant
(X2)		0,257	4.355	0,000	Significant
(X3)		0,290	4,433	0,010	Significant
(X4)		0,283	3,783	0,004	Significant
(X5)		0,237	3,563	0,000	Significant
Multiple R = 0,835; R Square = 0,792; F_{Sign} = 0,000; $F_{statistic}$ = 47,825;					

Source: Data primary, 2015.
Note: Significant ($\alpha = 0,05$)

Table 1 showed that regression coefficient of each independent variable (independent) and the constant value constant can be identified from the results of multiple linear regression analysis. So that, it can be created the equation as follows:

$$Y = 14,736 + 0,248X_1 + 0,257X_2 + 0,290X_3 + 0,283X_4 + 0,237X_5 + e$$

Based on the equations, it can be known the constant value of the influence of independent variables X1, X2, X3, X4 and X5 to Y by 14.736. This showed that if the value of the independent variable is zero, income of goat farm business will amounted to 14.736. Meanwhile, the value of regression coefficient of each independent variable that effect income of goat farm business are : (a) The regression coefficient variable number of labor force (X1) of 0.248, it means that the number of labor force give effect to the income of goat farming. If the number of the labor force increases by one person, income of goat farm will increase by 0.248 rupiah, assuming the other variables are constant.(B) The regression coefficient of extensive land ownership variable (X2) is 0.25. it means extensive land ownership give influence to income of goat farm. If extensive land ownership increases by 1 ha, income of goat farm will increase by 0.257 rupiah, assuming other variables are constant. (C) The regression coefficient of the number of goat ownership variable (X3) is 0.290. It means that the number of goat ownership give effect to the income of goat farm If the number of goat ownership increases by 1 tail, income of goat farm will increase by 0.290 rupiah, assuming other variables are constant. (D) The regression coefficient

of income contribution of goat farm variable (X4) is 0.283. It means that income contribution of goat farming give effect to income of goat farm. If the income contribution of goat farm increase by 1 percent, income of goat farm will increase by 0.283 rupiah, assuming other variables are constant. (E) The regression coefficient of goat breeding cost variable (X5) is 0.237. It means that goat breeding cost give effect to income of goat farm. If the cost of goat breeding increase by 1 rupiah, income of goat farm will increase by 0.237 rupiah, assuming other variables are constant.

To determine which variables are the most dominant that give influence to dependent variable, variable on the dependent variable, It can be used analysis method that compares regression coefficient all independent variables. From the results of the regression coefficient, the number of goat ownership variable has the highest regression coefficient (B), the value is is 0.290. So that, the number of goat ownership variable was the most dominant variable that influence goat farm business income.

The power of influence and the contribution of independent variables on the dependent variables simultaneosly can be seen in multiple correlation coefficient (R) and the coefficient of determination (R2). The value of the multiple correlation coefficient (R) is 0.835, it means that the number of labor force (X1), extensive land ownership (X2), the number of goat ownership (X3), income contribution of goat farm (X4), cost of goat breeding (X5) have significant and positive association on income of goat farming business Banggai sub district Majene regency. While, the coefficient of determination (R2) is 0.792, it means that independent variables simultaneosly give influence to income of goat farming business in Banggai sub district Majene regency about 79.2%. meanwhile, 20.8% is influenced by other factors besides the model used in this study.

Table 1 showed that F statistic was 47.825 and F significant was 0.000 <0.05. This indicates that the independent variable such as the number of labor force (X1), extensive land ownership (X2), the number of goat ownership (X3), income contribution of goat farming business (X4), cost of goat breeding (X5) simultaneosly give effect to goat farming business income in Banggai sub district of Majene regency.

After testing the influence of the independent variables simulaneosly, further testing was the influence of the independent variables on the dependent variable individually (partial). The testing was conducted by using t test. This testing was carried out by comparing the $t_{statistic}$ of independent variable Xi with t_{table} or significance value $<\alpha = 0.05$. To recognize the effect independently of each independent variable will be presented as follows:

a. Analysis effect of the number Labor Force (X1) and goat farming income.

Table 1 showed that the significant value of the variable X_1 was (0.001) <(0.05). It means, the number of labor force variable was associated significantly with income of goat farming (Y) in Banggai sub district Majene regency.

b. Analysis of the influence of extensive land ownership toward goat farming income

Table 1 show that significant value of variable X_2 was (0.000) <(0.05). It indicated that the extensive land ownership (X_2) had influence to goat farm income (Y) in Banggai sub district Majene regency.

c. Analysis of the influence the number of goat ownership (X_3) toward goat farming income.

Table 1 showed that significant value of variable X_3 was 0,010 < 0,05. It means that the number of goat ownership variable (X_3) related to goat farming income in Banggai sub district Majene regency.

d. Analysis of the influence of income contribution of goat farming business toward goat farming income

Table 1 showed that significant value of variable X_4 was 0,004 < 0,05. It means that income contribution of goat farm business variable (X_4) associated with goat farming income in Banggai sub district Majene regency.

e. Analysis of the influence of goat breeding cost toward goat farming income

Table 1 showed that significant value of variable X_5 was 0,000 < 0,05. It means that goat breeding cost (X_5) related to goat farming income in Banggai sub district Majene regency.

The results showed that simultaneously, the number of labor force (X_1), extensive land ownership (X_2), the number of goat ownership (X_3), income contribution of goat farm business (X_4), goats breeding cost (X5) significantly associated with goat farming income (Y) in Banggai sub district Majene regency. This means that the high and low of goat farming income depends on the number of labor force, extensive land ownership, the number of goat ownership, income contribution of goat farm business and goats breeding cost. This is the same as the opinion of Setyanto (1994) that goats mostly grown by small farmers in rural. These efforts have generally remained supporting or complementary to their farming business. Results of goat farming business have been shown to contribute significantly to the income of families living in rural areas. Meanwhile, according to Muljana (2001) that goat

farm has more benefits than disadvantages. Goat farm has been popular in the community, such as chicken, duck or ox. Goat farming does not require a lot of specific requirements in breeding. Then, the most important factor is that almost all people like meat, many dishes are made from goat meat ingredient, too. Besides, goat also produces milk that can be drunk and have great efficacy for reducing pain of gatsrict problem.

The results showed that independently, the five sosio-economic factors give effect to goat farming income. This means that the increase of goat farming income depends on the fifth socio-economic factors. It is same as Sarwono opinion (2003) that the cattle in Indonesia kept as savings, producing manure, producing meat, milk and skin as well as to improve the social status of the owner. Goat breeding is conducted simply, as a side (part time) business or additional family income, also can be used as a livelihood. Meanwhile, according to Cahyono (1998) that in order to increase livestock production, the area became a major consideration as a source of feed supply only from the land where the cattle kept. Most of the farm in Indonesia is located in an agricultural area, thus as a feed source can be calculated based on the area of agricultural land, fee and revenue of breeder have positive effect on profits.

CONCLUSION

Simultaneolsy, the number of labor force, extensive land ownership, the number of goat ownership, income contribution of goat farm, costs of goat breeding have significant association on income of goat farming business

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