



Factors Affecting Farmers to Do Functions of Agricultural lands to Non Agriculture in Maros District

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ABSTRACT: This study aims to look at the factors that influence farmers to transfer functions of agricultural land to non-agriculture in Maros Regency. The unit of analysis in this study was Marusu Sub-district as the region with the largest case of land conversion in Maros Regency. Data collection is done through direct interviews. Data are analyzed quantitatively using methods Ordinary Least Square. The data analysis technique used in this study is a quantitative method of data analysis using a multiple regression analysis model with the help of SPSS 21 software. The results showed that land productivity had a negative and significant effect on the extent of land use change, land selling value had a positive and significant effect on the area of land use change, farming experience had a negative and insignificant effect on land use change, farmers' age had a positive and not significant effect on the area of land use change, and employment status have a positive and significant effect on the area of land use change.

Keywords: Land Productivity, Land Selling Value, Farming Experience, Age, Job Status, and Area Transfer Function Area

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I. INTRODUCTION

Economically, agricultural land is the most essential input from the ongoing production process, employment opportunities, income, foreign exchange and so on. Judging from the social aspect, the existence of agricultural land is related to the existence of institutional farming communities and other cultural aspects. In terms of the environment, agricultural land functions as a water catchment area (Handoyo, 2010).

The agricultural sector has contributed greatly to national development, such as increased national resilience, employment, increased community income, increased Gross Regional Domestic Income (GDP), foreign exchange earnings through export-import, and suppressed inflation. Therefore the loss of agricultural land due to the conversion of agricultural land to non-agricultural use will have a negative impact. Such as the loss of farmers' livelihoods, and disruption of national food security due to declining food production due to reduced agricultural land as a factor that has a significant effect on the amount of food production.

Based on data from the Central Statistics Agency (BPS) in 2009-2013, the area of non-irrigated paddy fields according to municipal districts in South Sulawesi Province can also be seen as the decline in the number of non-irrigated rice fields in particular in Maros Regency. We can assume that the factors that cause a decrease in the area of non-irrigated paddy fields are one of them due to land use change factors. Dimanadalam three consecutive years can be seen that the area of wetland in Maros regency in 2009 covering an area of 12 613 (Ha), but in 2010 fell to 12 483 (Ha), and in 2011 again decreased 10 993 (Ha). It can be seen that where maros regency is one of the regencies which has an area of agricultural land which from year to year has always decreased non irrigated paddy fields in 3 consecutive years, it is assumed that within each year the function of agricultural land to non agriculture.

II. RESEARCH METHODS

2.1 Location and Type of Research

The study was carried out in Maros Regency, Marusu District, South Sulawesi Province by taking samples that still had paddy fields and land that had land conversion. Location selection is done purposively. Sub-district selection is based on the number of occurrences of land conversion.

The types of data used in this study are primary data and secondary data, both quantitative and qualitative. Primary data is data that is obtained by direct interview using a questionnaire (questionnaire) against key persons and farmers. Secondary data was obtained from agencies related to the research, namely: BPS Kota Maros, Bapedda, and data from previous research results as well as some literature that supports this research.

To support the completeness of the materials and sources, the author uses literature in several related libraries, journals and several guidebooks that are used to add insight into the problems being studied .

2.2.Data Types and Analysis Methods

The data analysis technique used in this study is a quantitative data analysis method using multiple regression analysis models and computer software assistance through the SPSS program. Data analysis was performed by processing the data obtained in order to achieve the desired goals in research.

Analysis method is a method used by researchers to find the influence of independent variables with non-independent variables. In this study to analyze or see the effect of the productivity of land, sale value of the land, farming experience, age, job status and the amount of land conversion in Maros Regency. Mathematically the model can be written as follows:

$$Y = F (X1, X2, X3, X4, D5)$$

$$Y = \alpha_0 + X1^{\alpha_1} + X2^{\alpha_2} + X3^{\alpha_3} + X4^{\alpha_4} + D5 + \mu \dots\dots (3.1)$$

Where:

μ = Error caused by error term

α = Constant

Y = Area of land that switches functions

X1 = Land Productivity

X2 = Farming Experience

X4 = Farmer's age

D5 = Job Status

Furthermore, the regression function is transformed into multiple logarithms using natural logarithms (ln) (Damodar Gujarati, 1991), where the dependent variable is in the form of logarithms while the independent variable is fixed. This is done because the semi logarithmic model can produce the best estimation model, and has a fairly high level of accuracy. In addition, the purpose of semi logarithms is according to Ghozali (2009) that the regression results violate the classical assumptions of autocorrelation and heteroscedasticity, so to treat the disease the regression model is transformed into a natural logarithm following OLS models with logarithmic forms natural:

$$\ln Y = \alpha_0 + X1^{\alpha_1} + \alpha_2 \ln X2 + X3^{\alpha_3} + X4^{\alpha_4} + D5 + \mu \dots\dots\dots (3.2)$$

Where:

μ = Error caused by error term

α = Constant

Y = Area of land that switches functions

X1 = Land Productivity

X2 = Farming Experience

X4 = Farmer's age

D5 = Job Status

ln = Natural logarithms

$\alpha_1, \alpha_2, \alpha_3$ = regression coefficient

The regression will be fulfilled if the regression coefficient is linear, unbiased and has a minimum or efficient variant. Therefore various tests are needed to find out whether or not there is a disease in the model. With the OLS method of linear coefficient regression analysis of each coefficient variable this is an estimate of each influential factor. As well as showing the extent to which these factors together influence the amount of land use change or the dependent variable.

III. RESEARCH RESULT

Regression coefficient of land productivity (X1) is -0.005. The coefficient indicates a negative relationship between land productivity and the extent of land use change. Each increase in land productivity of 1 kg will reduce the area of land conversion by 0.005 meters, and vice versa, every decrease in land productivity of 1 kg will increase the area of land conversion by 0.005 meters. The regression coefficient of the land selling value variable (X2) is 0.618, the coefficient indicates a positive relationship between the land selling value and the area of land use change. Every increase in land sale value of 1 IDR will increase the area of land use conversion by 0.618 meters, and vice versa, every decrease in land sale value of 1 IDR will reduce the area of land conversion by 0.618 meters.

Farming experience regression coefficient (X3) is -0,011. These coefficients indicate a negative relationship between farming experience on land use change. Every increase in farming experience of 1 year will reduce the area of land conversion by 0.011 meters, and vice versa, every decrease in farming experience of 1 year will increase the area of land conversion by 0.011 meters. Regression coefficient of age variable (X4) is 0.004, the coefficient indicates a positive relationship between age and area of land use change. Every increase in age by 1 year will increase the area of land use conversion by 0.004 meters.

The regression coefficient of work status variable (X5) is 0.361, the coefficient indicates a positive relationship between permanent employment status and the area of land use change. Each increase in the number of farmers with a permanent employment status of 1 soul will increase the area of land use conversion by 0.361 meters, and vice versa, each decrease in the number of farmers with a permanent employment status of 1 person will reduce the area of land conversion by 0.361 meters.

IV. DISCUSSION

4.1 Effect of Land Productivity on Area Transfer Function Area

Based on the results of research data analysis, productivity has a negative and significant effect on the area of land use change in Maros Regency. The coefficient value of -0.005 indicates that if the productivity variable increases by 1 kg, then the area of land conversion has decreased by 0.005 meters. The coefficient has a negative value indicating that the more productivity increases, the lower the area of land that switches functions.

The findings of this study illustrate that the local government of Maros Regency can optimize the increase in farmer productivity through a number of programs such as assistance with agricultural production facilities, improving the quality of agricultural understanding through training and counseling, and business capital assistance programs to be directed and appropriate target to increase income.

The implications of the results of this study indicate that high productivity of farmers will cause a low land area to switch functions. It can be seen from the average age of the respondent farmers that most are in the productive age range, therefore the local government of Maros Regency can optimize the increase in farmer productivity through a number of programs such as assistance with agricultural production facilities, improving the quality of agricultural understanding through training and counseling, and business capital assistance programs for farmer groups need to be directed and targeted to increase their income.

4.2 Effect of Land Selling Value Against the Area of Function Transfers

Based on the results of the analysis of research data, land prices have a positive and significant effect on the area of land conversion in Maros Regency. The coefficient value of 0.618 shows that if the variable land price has increased by 1 Rp, then the area of land use change has increased by 0.618 meters. The coefficient is positive, indicating that the higher the price of land, the more the area of land will change function.

These results have shown consistency with the findings of research conducted by Pewista and Harini (2010), which explains that economic factors are one of the causes of the conversion of agricultural land to non-agriculture, as previously explained. This encourages the owners of agricultural land, especially rice fields, to sell their land because they are pressed for life. The lure of high land selling prices will also be a strong attraction for land brokers.

Land selling prices seem to correlate with existing accessibility, such as roads, supporting public facilities, etc. However, some respondents disagreed with this, the relatively strategic location was forced to be sold because the surrounding land would be planned for housing construction by investors. The price of land paid is often lower than that of individual land buyers, where investors buy land with bulk systems so the price is even lower.

The implications of this study indicate that the most influential factor in land conversion in Maros Regency is land selling value. The selling price of land that is classified as high makes it the main attraction for landowners to sell their agricultural land to be converted into land use. This is considering that Maros Regency is located on the outskirts of the city bordering the city of Makassar so that it can be affected by rapid development.

4.3 The Effect of Farming Experiences on the Area of Transfer of Land Functions

Based on the results of research data analysis, farming experience has a negative and not significant effect on the area of land use change in Maros Regency. This shows that any increase or decrease in farming experience does not affect the increase or decrease in land use change.

The implication of the research shows that farmers who have long experience have more mature management capacity and have a lot of experience so they are very careful in acting but farmers who have a lot of knowledge and skills about innovation, are usually easy to change their assessment of innovation so that harmony between attitudes and actions, which in turn will have an impact on increasing income. farming experience will increase the productivity and income of farmers as a result of increased skills in making

production so that it will produce an innovation which in turn will affect the increase in farmers' productivity and income.

4.4 Age Effects on Land Transfer Function Area

Based on the results of the analysis of research data, the age of farmers has a positive and not significant effect on the extent of land conversion in Maros Regency. This shows that every increase or decrease in age does not affect the increase or decrease in area of land conversion.

The implications of the results of the study show that the lack of young people working on agricultural land in Maros Regency has an impact on the low ability to produce output, if observed by farmers who work on agricultural land in Maros Regency dominated by relatively old population, this is believed has an impact on the low ability to create output and in turn has an impact on the low income generated so that it can encourage farmers to convert their agricultural land.

4.5 Effect of Job Status on the Area of Function Change of land

Based on the results of the research data analysis, employment status has a positive and significant effect on the area of land use change in Maros Regency. The coefficient of 0.361 indicates that every increase in the number of farmers with a permanent employment status of 1 soul will increase the area of land use conversion by 0.361 meters, and vice versa, every decrease in the number of farmers with a permanent employment status will reduce the area of 0.361 meters.

These results are in line with the findings of research conducted by Pewista and Harini (2010) which explains that the majority of the population does not have as many as 49 jobs or 70% of farmers in Bantul Regency. With no second job, no additional income will be obtained. This will make it one of the drivers for someone who owns agricultural land to convert his agricultural land.

The implications of this study indicate that employment status affects the extent of land conversion in Maros Regency. By not having a side job by the farmer, no additional income will be obtained. With farmers releasing their cultivated land, of course, this can lead to changes in the livelihood system or changes in the employment status of the farmer before releasing the land and after releasing the arable land. With the change of livelihood and employment system after the release of land for conversion, then indirectly will result in changes in revenue of the farmers themselves.

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