RESEARCH ARTICLE

THE EFFECT OF ABSORBED LABORS AND LAND AREA ON THE ECONOMIC GROWTH OF AGRICULTURAL SECTOR IN WEST KALIMANTAN

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Abstract : The purpose of this study was to determine the effect of indicators (absorbed labor and agricultural land area) on economic growth in the agricultural sector in West Kalimantan. The methodology used in this research is quantitative and qualitative methods, the analysis method uses regression using panel data (cross section and time series), observation of data as much as 70 (5 x 14 districts / cities), for 5 years. The data processing process uses the EVIEWS computer program. Based on the results of the Hausman Test calculation test, the regression results and various tests that have been conducted show that labor absorbed and widely has a negative and significant effect on the economic growth of the agricultural sector in West Kalimantan, while the land area variable has a negative but not significant effect on the agricultural sector economic growth in West Kalimantan.

Keywords: Labor Absorbed; Agriculture Sector; Agricultural Land Area; Economic Growth

JEL Classifications: M1, E0,

1. Introduction

The short-term and long-term development goals need a balance between agriculture and advanced industrial fields supported by a strong agricultural sector so that it can open up broad employment opportunities and new jobs and be able to absorb a large number of workers. The development of the agricultural sector is a key element in accelerating the creation of long-term goals, in order to create a framework for an area to grow and develop with its own strength and fulfillment of basic needs of the community, especially the need for food. With the development in the agricultural sector is expected to be able to increase production and economic growth which in turn can improve the welfare of farmers. Increased income in the agricultural sector needs attention because the population generally depends on agriculture (Soedarya, 2009).

In general, West Kalimantan has enormous potential in the development of the agricultural sector, and becomes a leading sector in regional development, because the large number of people depend on the agricultural sector. The economic growth of the agricultural sector in West Kalimantan from 2006-2010 experienced significant growth. The highest growth is Kubu Raya Regency, which is 6.19%, which is quite high, where Kubu Raya is a new regency which is an expansion area of Pontianak Regency. Sambas Regency ranks second, which is 5.56%. And third place is Singkawang City at 5.06%.

Until now, agriculture is still the backbone of the regional economy, both as a producer of added value and as a provider of employment. The rapidly growing agricultural sector will be able to increase the demand for income and welfare of the population in the regions, especially in rural areas, which in turn

can increase the demand for goods and services produced by the agricultural sector. According to Jhingan (1993: 362), the contribution of the agricultural sector to economic development lies in the following matters: 1) Providing a greater food surplus to the increasing population. 2) Increasing demand for industrial products and thus will encourage the necessity to expand the secondary and tertiary sectors. 3) Providing additional foreign exchange earners for capital goods for development through continuous export of agricultural products. 4) Increasing village income to be mobilized by the government. 5) Improve community welfare in the area.

Economic growth is often used as the main indicator in development. Because economic growth has implications for the performance of the economy in a region. the higher the level of the economy in a region, the more the consumption, production, investment and trade activities in the area are developed, which will then have an impact on employment.

Table 1. Absorbed Labor in Agriculture Sector in West Kalimantan Province (in Soul)

Year	Absorbed Labor
2007	41.206
2008	41.331
2009	41.611
2010	41.494
2011	39.088

Source : BPS Kalimantan Barat, 2012

Land area is very important because it is a place to grow and develop plants that will produce an agricultural product. Fertility conditions and how to cultivate land will greatly affect the level of production. The area of land in agriculture greatly affects the scale of the business carried out, and this scale will affect the efficiency of an agricultural business.

Table 2. Total Agricultural Production Based on Land Area of West Kalimantan Province

Year	Area Of Rice Fields (Ha)	Total Production /(Ton)	% Growth
2007	497.987	168	-
2008	514.305	986	4,87
2009	546.594	1.042	0,06
2010	546.906	1.349	0,29
2011	523.392	1.823	0,35

Source: BPS Kalimantan Barat, 2012

During the five years the area of agricultural land showed an increasing trend except in 2011 it experienced a decline but the growth of the number of production was quite varied. The highest increase in 2008 (4.87%) while the following years rose slowly. From the description of the problems in the background above, it needs to be tested and analyzed whether there is an influence between absorbed labor and land area on economic growth in the agricultural sector in West Kalimantan Province. The purpose of this study is 1) to analyze the effect of labor absorbed by the agricultural sector on the economic growth of the agricultural sector in West Kalimantan. 2) To analyze the effect of agricultural land area on economic growth in the agricultural sector in West Kalimantan.

2. Literature Review

Economic growth according to Sukirno (1996 : 33) is a process of increasing per capita output that is continuous in the long run. Economic growth is one indicator in the success of development. Indonesia is an agricultural country, and most of the population lives farming. Therefore the development of the agricultural sector must take precedence, given that this sector has the potential to be developed. The participation of the community and the government is very much needed to achieve the development of the agricultural sector. Harrod Domar in Mankiw (2003: 175) his theory is based on market mechanisms without government intervention. However, the conclusion shows that the government needs to plan the size of the investment so that there is a balance in the supply side and the revenue side of the goods.

Agricultural development can be defined as a process of social change. Its implementation is not only intended to improve the status and welfare of farmers, but at the same time it is also intended to develop the potential of human resources both economically, socially, politically, culturally, environmentally, and through improvement, growth and change (Iqbal and Sudaryanto, 2008).

Lewis in Jhinggan (2010), states that there are several basic requirements for economic development, namely:

1. On the basis of its own strength is that the growth process must rely on the economic ability in the desire to improve destiny and initiatives to create material progress must emerge from the citizens themselves.
2. Eliminating market imperfections. Market imperfections cause immobility of factors and

hinder sector and development expansion. To eliminate this, the existing socio-economic institutions must be improved and replaced with better ones.

3. Change in structure. This change in structure implies a transition from traditional agricultural society to a modern industrial economy.

Sumodiningrat (2000: 1-2) said that "in an effort to break away from the state of the economic crisis as stated in social security network programs, then agricultural development is placed as the main base in efforts to overcome the impact of a more severe crisis. In addition to absorbing a lot of labor, it is also a safety valve, also because the Indonesian people are already accustomed to working in agriculture. Agricultural development should prioritize the potential of the region and the capabilities of its people. The comparative advantage in the form of natural resources needs to be accompanied by an increase in competitive advantage which is realized through the creation of increasingly professional peasant human resources. The peasant community, especially the disadvantaged peasant community as the target of community empowerment, needs to be accompanied as a more advanced, independent, prosperous, and just human being farmer. Natural and human resources should be the basis for future agricultural development (Wibowo, 2002).

Understanding of land according to (Christian and Stewart, 1968) is the surface of the earth along with all the characteristics that are there and important for human life. In detail (Brinkman and Smyth, 1973; Vink, 1975; and FAO, 1976) are defined as an area on the surface of the earth, including all components of the biosphere that can be considered fixed or cyclical above and below that area, all of which influence on land use by humans at present and in the future.

A.T. Mosher (1965) argues, there are five kinds of agricultural development requirements, namely:

1. Agricultural development education
2. Farm production credit
3. Farmers' mutual cooperation activities
4. Repair and expansion of agricultural land
5. National planning from agricultural development.

Previous research Widnyana (2011) with the title "the effect of land area, number of labor and government expenditure on rice production in Badung Regency in 1998-2007. Shows that simultaneous paddy field area, number of labor, and government investment have a significant influence on rice production in Badung Regency. Likewise similar research was put forward by Wicaksono (2012). Los and Gardebroek (2015) examined the interaction between agricultural development and economic growth in African countries in the period 1961-2010. The method used is granger causality which concludes that there is a two-way causality relationship between agricultural development and economic development.

Research by Guo, Wen and Zhu (2015) on the effect of general labor on agricultural production and the results are significant for agricultural output in China. Meanwhile, Sheng (2008) examines labor migration in China. Emigration of rural labor has a significant influence on agricultural land production and labor emigration resulting in increased mechanization of agriculture, efficient employment of new agricultural technologies to increase human resources, promotion of land evolution and agricultural production systems which in turn have an impact on increasing farmers' incomes. Lanzy, Dietz and Swansong (2016), examine the evolution of agricultural productivity interacting with economic growth and population and related demand for food. The growth of the two sectors is Schumpeterian, where the manufacturing sector produces good traditional consumption and the agricultural sector produces food to maintain the contemporary population.

3. Research Methods

This study uses descriptive research methods, which describe something based on facts by presenting data systematically. This study uses secondary data in the form of BPS reports written reports, literature and documentation, namely data, the amount of labor absorbed and land area and the growth of the agricultural sector in West Kalimantan Province in 2006-2010.

The variables used in this writing are independent variables and dependent variables. The independent variable consists of the amount of absorbed labor (X1) is the total population working in the agricultural sector in West Kalimantan in 2006-2010 and the area of land (X2) is the total productive area of rice fields in West Kalimantan in 2006-2010 . Dependent variable, economic growth (Y) is the increase in output produced from West Kalimantan's agricultural sector production in 2006-2010. The data used in the form of panel data is a combination of time series data (for 5 years, namely 2006-2010) and cross section data for districts / cities as many as 14, thus forming the number of data observed as many as 70 data (14 districts / cities for 5 years).

The analytical method used in this study is a multiple regression method, namely to determine the effect of two independent variables on the dependent variable, with multiple regression equations as follows:

$Y = a_0 + a_1X_1 + a_2X_2 + e$ ……..……..…..(1)

$PE = a_0 + a_1TKT + a_2LL + e$ …….....…….(2)

Where :

PE = Economic Growth
TKT = Absorbed Labor
LL = Land Area
a0 = Constants
a1, a2, a3 = coefficient
e = error

4. Results and Discussion

Until 2011, the economic structure of West Kalimantan was still dominated by the agricultural, trade, hotel and restaurant sectors, as well as the manufacturing industry sector, of the three sectors forming 61% of total GDP while 39% were formed by 6 other sectors. The movement of the three dominant sectors has the potential to affect the economic performance of the Province of West Kalimantan.

In general, the performance of agriculture is still dominated by food crops, especially rice and oil palm plantations. In 2011 the rice harvested area reached 124.81 thousand hectares wider than before. Assuming productivity of 31.21 KU / Ha, rice production in West Kalimantan reaches 389.53 thousand tons. This increase was influenced by the increase in the area of rice fields where in 2010 the total area of 428.46 thousand ha in 2011 increased to 437.53 thousand ha.

In general it is assumed that the growth of the agricultural sector is influenced by many factors including absorbed labor and land area. The number of workforce in 2010 was 2,197,325 people, of which 2,095,705 people worked or 95.38%. The amount of absorbed labor is one of the important factors in the performance of the agricultural sector because it is generally farmer productivity and which determines the output produced.

Table 3. Correlated Random Effects – Hausman Test

Test cross-section random effects

Test Summary	*Chi-Sq. Statistic*	*Chi-Sq. d.f.*	Prob.
Cross-section random	22.767186	3	0.0000
Cross-section random effect test comparisons			
Variabel	Fixed	Random	Var (Diff.)	Prob.
X1	-0.000213	-0.000075	0.000000	0.3359
X2	-0.005781	-0.001509	0.000001	0.0004

Source : Data Olahan, 2012

Table 4. Estimated Results With Coeffisients

Variabel	Coefficient	Std. Error	t-Statistic	Prob.
C	119.6474	16.58763	7.213049	0.0000
X1	-9.93E-05	3.44E-05	-2.885866	0.0057
X2	-0.000811	0.000430	-1.883298	0.0655

Source : Processed Data, 2012

The Effect of Absorbed Labor Against the Economic Growth of the Agricultural Sector

Based on the probability value (significance) of 0.0057. It means that it can be concluded that the absorbed labor variable has a negative and significant effect on the variables of economic growth in the agricultural sector by testing the confidence level 95 (α = 5%). This means that the increase in absorbed labor will reduce the economic growth of the agricultural sector.

This can be caused by a large number of workers but not matched with the skills, skills, qualifications that are appropriate and the unavailability of employment, thus causing problems. In addition, the large number of workers in the agricultural sector tends to cause underemployment under cover.

This is in line with classical economic theory (Sukirno, 1996: 423-270), saying that population growth will cause an increase in per capita income. However, if the population continues to increase, the more yielded law which decreases will affect the function of the amount of production, namely marginal production will decrease and will lead to the state of per capita income equal to marginal production.

Similarly, the opinion expressed by Sudarsono (2000: 613) that quality or characteristics need to be owned by someone to produce goods and services. The higher the skills possessed, the quality

of work will increase and the results obtained will be maximum.

Effect of Land Area on Agricultural Sector Economic Growth

The influence of land area has a negative and not significant effect on economic growth in the agricultural sector in West Kalimantan. This is indicated by the regression coefficient that is equal to -0.000811 and the probability value (significance) is 0.0655. variable area of agricultural land does not have a significant effect on economic growth in the agricultural sector, because based on the static data of land area of each regency / city varies geographically and uses land for other purposes such as housing construction, use of agricultural land that does not produce agricultural products such as plants medicine, ornamental plants, farms, plantations, fish farms and others. As well as many unprocessed vacant land for agricultural land, the land is left idle and grows useless weeds.

The soil fertility factor is also one of the capital to produce maximum agricultural production. Proper processing of land with systems such as the use of chemical fertilizers, good soil treatment, regular irrigation is also a determining factor in maximizing agricultural output. In West Kalimantan, some farmers still use traditional methods of cultivating land, the lack of modern technology that develops in the area is an obstacle while the purchase price of agricultural equipment is increasingly expensive.

This is in accordance with what Kuncoro (2006) stated that naturally development must be supported by the development of a strong agricultural sector both in terms of supply and in terms of demand. The strength of the agricultural sector is seen from the supply and demand side, so agriculture will be able to support and make connections with other sectors of economic activity. Based on data on land area in West Kalimantan, the area that has the most extensive land is Sambas Regency with an area of agricultural land of 87.755 hectares of the total area. This land area is not comparable with its contribution to growing the agricultural sector economy in West Kalimantan, which is only 6.06%. Meanwhile, Pontianak Regency has a land area of 18,937 Ha from the total area. Pontianak Regency contributes 99.54% in the economic growth of the agricultural sector in West Kalimantan. (BPS, 2010).

5. Conclusion

Workers who work in the agricultural sector have a negative and significant influence on the growth of the agricultural sector in West Kalimantan. The agricultural sector is the most dominant in the absorption of the workforce of around 59.51% of the total workforce compared to other sectors such as the industry, trade and others. However, the composition of the working population is still dominated by low education, and the skill level is low so most of them are only limited to farm laborers and low productivity gardens. Variable area of land has a negative effect on economic growth in the agricultural sector. The increasing number of people affects the level of consumption of agricultural products, especially food. The area of land is also reduced because switching functions into residential areas and land is still a lot of people who sleep *(unproductive).*

Besides that, the available land area is not fertile. This study provides suggestions in the form of 1) the government needs to improve the skills of workers, among others by holding special agricultural education programs, developing marketing networks for agricultural production, developing agriculture-based industrialization, adding access - access to information sources such as the internet, and placing officers or regional officials in every agricultural institution that is in accordance with the knowledge and their respective fields *(agricultural sector)*. 2) To maximize land use, it is recommended that idle land or vacant land be used for productive and environmentally friendly agriculture. Improving agricultural infrastructure and improving appropriate and insightful agricultural technology, providing information on the world of agriculture and improving quality.

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