Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE) Vol. 7. No. 2 (2024)
e-ISSN: 2621-606X Page: 4220-4240

THE IMPACT OF GOVERNMENT EXPENDITURE IN THE AGRICULTURE SECTOR ON THE INCLUSIVENESS OF WESTERN INDONESIA'S ECONOMIC GROWTH

Tasya Nadya Utari[1]
Institut Pertanian Bogor, Bogor, Indonesia
utariasyanadya@gmail.com

M. Parulian Hutagaol[2]
Institut Pertanian Bogor, Bogor, Indonesia
fem@ipb.ac.id

Yeti Lis Purnamadewi[3]
Institut Pertanian Bogor, Bogor, Indonesia
yetilispurnama@yahoo.com

Abstract

Economic growth, income inequality, and poverty are longstanding issues that are interesting to study. Inclusive economic growth is a model of economic growth that is often heard and sought to be implemented by various countries around the world. The increase in the government budget for the agricultural sector is expected to finance various programs, especially those aimed at increasing food production itself. This study aims to determine the level of inclusiveness of economic growth in Indonesia and to understand the impact of government spending in the agricultural sector on economic growth. The research method used in this study is panel data, utilizing secondary data processed with E-Views. The results of this study indicate that the economic growth in each province in Western Indonesia has been inclusive. Aspects of government spending in the agricultural sector that positively affect the inclusiveness of economic growth include fertilizer subsidies, irrigation infrastructure, and rural road infrastructure.

Keywords: Inclusive Growth, Government Spending on Agriculture, Western Indonesia

INTRODUCTION

One of the goals and ideals of the Indonesian nation as stated in the 1945 Constitution is to advance the welfare of the nation based on social justice for all Indonesian people. This goal is the main focus in formulating development policies and programs aimed at improving people's quality of life, economic growth, and social and political stability. In the national development framework itself, the aim is to achieve sustainable economic growth, increase social welfare, and eradicate poverty (Supriatna et al, 2023).

National prosperity has many meanings, both economically, socially, and overall. The level of well-being has many different measures depending on the perspective adopted. Economic development is often measured by economic growth, on a national scale it is measured by gross domestic product (GDP) or by gross regional domestic product (GRDP) on a regional scale. This economic growth is the framework for economic development (Bappeda DIY & BPS DIY, 2016). Economic growth will be followed by a vertical flow from the rich to the poor. The benefits of economic growth will be felt by the rich group after spending the results of the economic growth they receive, then the poor group will start to feel it. The trickle-down effect theory, which was first developed by Lewis (1954) and then expanded by Ranis and Fei (1961), states that the progress of a group of people will automatically trickle down to create jobs and various economic opportunities, which will then create equality as a result. from economic growth itself (Hasan, 2021).

Arsyad (2017) stated that economic growth is a measure of development success in classical economic theory, but in reality, it does not fully reflect the conditions that occur in society. Therefore, increasing economic growth does not always have an effect that can reduce inequality between social groups, thereby reducing poverty levels (Todaro and Smith, 2015). This is also supported by the opinion of McKinley (2010) that concerns arise regarding the inadequacy of GDP per capita as a measure of economic growth. This concern is rooted in the argument that a good measure of economic growth should cut across all aspects of the individual growth of a given country. Thus, a good measure of economic growth must provide a measure of income and non-income well-being. The inadequacy of GDP per capita as a measure of economic growth and prosperity is visible in the case of Asia, (Ali and Son, 2007), and in the case of Nigeria (Oluseye and Gabriel, 2017). In both cases, there is indeed a consistent increase in GDP per capita, which is an indication of increasing levels of growth and prosperity. However, despite these positive indications, Ali and Son (2007) explain that the existing level of inequality appears to be widening. Findings by Ali and Son (2007) and Oluseye and Gabriel (2017) indicate clearly that growth has benefited a select few, thereby marginalizing people in low-income groups and widening inequality gaps.

Economic growth accompanied by ever-increasing income inequality within a country can cause inequality between poor and rich communities. Increasing inequality will encourage crime from people who feel their right to a decent life has been taken away. Apart from that, problems of poverty and income inequality will also arise and hinder the acceleration of economic growth itself. Poverty and income inequality will also have an impact on social unrest, uncertainty, hunger, poor health, and malnutrition among humans. If this situation continues, it will ultimately damage macroeconomic stability and the continuity of the existing government. Therefore, development targets are not sufficient for high economic growth. It is necessary to ensure that all communities enjoy the benefits of economic growth (Asian Development Bank 2011).

In this case, there needs to be an additional measure that can describe the success of a region's economic development. The concept of inclusive growth is defined as growth that not only creates better economic conditions but also guarantees equal accessibility to opportunities for all segments of society, especially for the poor (Prasetyo and Firdaus, 2009). Apart from that, according to Singosaru (2017), inclusive growth is growth that involves all levels of society to increase economic growth, reduce unemployment, and reduce inequality. This is also in line with Ramos, Ranieri, and Lammens (2013) who state that inclusive growth is an economic process characterized by equal distribution of the positive impacts of economic growth and comprehensive participation from all levels of society in the growth process.

For developing countries, the government has a very important role in spurring economic growth. The government's role in regulating business competition, providing physical infrastructure and education, as well as efforts to equalize income is very vital because free market mechanisms are very dangerous for the national economy which is still dominated by the informal sector if left to run without intervention. In general, there are two media used by the government to intervene in the economy: fiscal and monetary policy channels. The fiscal channel, which includes government regulation in terms of spending and tax collection, is the instrument most often used to intervene in the real sector.

Todaro (2004:18) states that the government must be recognized and trusted to assume a larger and more decisive role in efforts to manage the national or regional economy. Through spending, the government can allocate these funds to finance the provision of various social facilities that the private sector is reluctant to provide. If private investment spending cannot encourage an increase in Gross Domestic Product (GDP), then government spending can replace it (Nopirin, 2007: 87). Keynes also stated that real investment is the main key to increasing GDP, for example in new infrastructure projects. According to Keynes, this investment will have a positive effect on job creation and subsequently generate prosperity through a multiplier effect (Arif Budiman, 2000:31).

Government spending that is too small will harm GDP, proportional government spending will increase GDP, and wasteful government spending will hamper GDP. But in general government spending has a positive impact on growth (Marganda and Sirojulizam 2009).

Expenditures in the economic sector have a broad scope so they focus only on one sub-sector. The development of the agricultural sector in Indonesia is still considered the most important sector of the overall results of economic development. Several reasons underlying the importance of agricultural development in Indonesia are; 1. The resource potential is large and diverse; 2. The share of national income is quite large; 3. The large share of national exports; 4. The large population that depends on this sector for its livelihood; 5. Role in providing community food; and 6. Become the basis for growth in rural areas (Yustika, 2006).

The position of agriculture will be very strategic if we can change the mindset of society which tends to view the agricultural sector only as a producer of output to a mindset that views the agricultural sector as multi-functional in agriculture. The multifunctional agricultural sector has a role as 1. Producer of food and industrial raw materials. The agricultural sector is crucial in national food security as well as determining the nation's resilience. As we already know, Indonesia is a country with a fairly high population growth rate, so national food security is very important for the country. In the process of industrialization, the agricultural sector also produces raw materials for the agricultural industry such as rubber, sugar, palm oil, fiber, and others. 2. Regional and rural development. National development will be unequal if villages/regions are not developed, urbanization will not be suppressed and ultimately the level of gap between villages and cities will become higher. More than 83% of districts/cities in Indonesia have an agriculture-based economy. Village agro-industry will play an important role in helping village's economic growth, especially in efforts to absorb labor. 3. Buffer in times of crisis. The agricultural sector based on local resources has proven to be very reliable in times of economic crisis. 4. Socio-economic liaison between communities from various islands and regions as a glue for national unity. Each region in Indonesia has comparative advantages that can be developed to increase the advantages of each region. Interdependence between regions will be a tool in strengthening unity between nations. 5. Conservation of environmental resources. Agricultural activities play a role in buffering, providing water, clean air, and beauty. In essence, agriculture is always integrated with nature. Building and maintaining the agricultural sector means that we also play a role in preserving environmental resources. 6. Sociocultural society. Agricultural business is related to social culture and community customs. The social system built in agricultural communities has played a role in building food security and social resilience. 7. Job opportunities, GDP, and foreign exchange. More than 25.5 million families or more than 100 million Indonesians depend on the agricultural sector for their lives. The agricultural sector absorbs 46.3% of the total labor force, contributes 6.9% of total non-oil and gas exports, and contributes 15% of the national GDP (Kuncoro M, 2006). These factors are what made the agricultural sector taken in this research.

RESEARCH METHOD

Types, Sources, and Collection of Data

To provide a national picture of inclusive growth and the middle class in Indonesia, the data used in this research is all data from provinces in Indonesia for 5 years, namely 2015 to 2019. Provincial data is expected to provide a complete picture of national economic conditions as well as provide analysis. in more detail for each region. This research uses secondary data obtained from the Central Statistics Agency, the Directorate General of Fiscal Balance, and the Regional Development Planning Agency.

Analysis Method

Quantitative Method is the method used to answer the problems in this research. Data processing in research was carried out using Excel and Eviews 6.1 software. To determine the size of inclusive growth, a measurement formulated by the Asian Development Bank (ADB), namely the inclusive growth composite index, is used. Meanwhile, to analyze the factors that influence inclusive growth in terms of reducing poverty, reducing inequality in income distribution, and increasing labor absorption, as well as to analyze the impact of government spending in the agricultural sector on inclusive economic growth using the static panel data regression method.

RESULTS AND DISCUSSION

Model Fit Test

This research was conducted using a static panel data approach because the results of dynamic panel testing did not meet the required validity criteria. In static panel data analysis, we must choose the model that best suits the characteristics of the existing data. Three types of models can be considered, namely Pooled Least Square (PLS) or Common Effect Model, Fixed Effect Model (FEM), and Random Effect Model (REM). Choosing the right model is very important because it will help us understand the impact of the variables tested at the provincial level more accurately and can identify differences in effects between provinces or general effects that apply to all provinces. By choosing the right model, we can produce more reliable findings and provide more relevant policy recommendations to improve conditions at the provincial level.

To determine the best model for estimating static panel data at the provincial level, we have carried out a series of commonly used model selection tests, namely Pooled Least Square (PLS), Fixed Effect Model (FEM), and Random Effect Model (REM). To compare the selection between PLS and FEM models, we apply the Chow test approach. Next, to compare the FEM model with REM, we use the Hausman test approach. And finally, to compare between choosing the REM or PLS model, we adopt the Lagrange Multiplier test approach.

The application of this test is expected to identify the most appropriate and accurate model in estimating panel data at the provincial level. More reliable analysis results from this selected model will provide more useful information in the decision-making process and policy formulation at the provincial level. Thus, this approach is an important key in producing more robust and reliable conclusions to increase understanding of the impact of the variables tested at the provincial level and their potential to provide more effective and efficient policy recommendations.

The first stage of static panel data analysis at the provincial level is to compare two commonly used models, namely Pooled Least Square (PLS) and Fixed Effect Model (FEM). Selecting the best model, this research uses the Chow test approach which is specifically designed to compare these two models. The results of the test, which are recorded in Table 4.1, clearly show that the selected model is the Fixed Effect Model (FEM). The assessment was carried out based on a Chi-square probability value of 0.000, where this value is smaller than 0.05 (Prob < 0.05), which indicates that the FEM model is significant at the significance level $\alpha = 5\%$. The hypotheses tested in the Chow test are as follows: H0: PLS and Ha: FEM. If the results show strong significance, we can decide to reject H0 and accept Ha.

Table 1.

Chow Test Results

Effects Test	Statistics	df	Prob.
Period F	46.050447	(17.67)	0.0000
Period Chi-square	233.714609	17	0.0000

The conclusion that can be drawn from the Chow test results is that the best model for estimating static panel data at the provincial level is the Fixed Effect Model (FEM). Apart from that, the complete results of the Chow test can be accessed in more detail in the table provided. The process of selecting an appropriate model is a critical step in panel data analysis, and by choosing the FEM model, we hope to provide more accurate and meaningful analysis results, so that they can be used as a basis for decision-making and policy formulation at the provincial level.

After successfully determining that the Fixed Effect Model (FEM) is more suitable for estimating static panel data through the Chow test, the next step is to compare the FEM model with the Random Effect Model (REM) using the Hausman test method. In the Hausman test, the hypothesis proposed is H0: The best model is REM, while Ha: The best model is FEM. After carrying out the Hausman test using Eviews software, the results show a statistical probability value (Prob > chi2) of 0.000. This value indicates that we can reject the null hypothesis (H0). Thus, based on the Hausman test results, the Fixed Effect Model (FEM) model is more suitable and superior in estimating static panel data at the provincial level when compared to the Random Effect Model (REM). The conclusion is that it can be confirmed that the FEM model is a more appropriate choice and is the best model to use in static panel data analysis at the provincial level. The reliability and accuracy of the FEM model tested through the Hausman test provide more confidence in its use to support decision-making and policy formulation at the provincial level. These results provide deeper and more statistically robust insights, thereby providing a more meaningful contribution to understanding the impact of certain variables at the provincial level and their implications for relevant policies.

Table 2.

Hausman Test Results

Test Summary	Chi-Sq Statistics	Chi-Sq df	Prob.
Random cross-section	31.453058	7	0.0001

Based on the hypothesis that has been proposed and the results of the Hausman test, it can be concluded that the Random Effect Model (REM) is not the best model for estimating static panel data at the provincial level. Instead, the model chosen and most suitable for use in estimation is the Fixed Effect Model (FEM). It is important to note that testing between the REM model and Pooled Least Square (PLS) does not need to be carried out again, considering that the results of the two previous tests, namely the Chow test and the Hausman test, have consistently reached the same conclusion, namely that the FEM model is the best suitable for static panel data estimation at the provincial level. This conclusion provides more strength in recognizing the value and reliability of the Fixed Effect Model (FEM) as the right choice for use in static panel data analysis at the provincial level. Thus, the FEM model can be relied on as a basis for effective decision-making and policy formulation. These results significantly increase understanding of the relationship between certain variables and the provincial level, and their impact on the formulation of more appropriate policies that have a positive impact at the provincial level.

Testing LSDV Assumptions and Hypotheses

The Fixed Effect Model (FEM) is the optimal choice for use in panel data estimation. This model has the advantage of differentiating the intercept between individuals, accommodating unobservable variations between individuals, and maintaining the slope or regression coefficient which remains unchanged for each observation time. To overcome this intercept difference, a dummy variable is used in the one-way component error and it is assumed that the independent variables are independent. Thus, the FEM model is often referred to as the Least Squares Dummy Variables (LSDV) model.

Table 3.

Multicollinearity Test Results

Variable	VIF
PPK	3.253105
LNIRG	2.184567
LNJDES	3.985981
ALSINTAN	2.467792
LNDAKP	1.475980
FARMERS' EXCHANGE RATE	1.382802
TOTAL POPULATION	6.838560
AGRICULTURAL LAND AREA	3.389305

Before estimating using LSDV, it is very important to test whether this model meets the Gauss-Markov assumptions or not. This test includes a multicollinearity test to identify the presence of perfect correlation between independent variables, an autocorrelation test to determine whether there is a correlation between times in the objects of observation, and a heteroscedasticity test to see whether the variance of the residuals in the model remains constant. These tests are very relevant to ensure that the model estimation results are linear, not affected by bias, efficient, and consistent. Through the GaussMarkov assumption test, the FEM model has been verified for its suitability and can be relied upon to estimate panel data reliably and accurately at the provincial level. By utilizing the FEM model, we can overcome existing differences between individuals and provide more in-depth and meaningful analysis results. With more valid information, the FEM model can provide effective support for appropriate and relevant decision-making and policy formulation at the provincial level.

Based on the results of testing the multicollinearity assumption using the Variance Inflation Factor (VIF) approach listed in Table 4.3, it can be seen that the VIF value for each independent variable shows a number smaller than 10. This means that none of the independent variables has a perfect correlation or very high linear relationship with other variables in the model. When the VIF value is below the limit of 10, this indicates that there is no serious problem in multicollinearity, and the multicollinearity assumption in the model is met. This means that the independent variables used in the model do not influence each other strongly and it is possible to estimate more reliably. Thus, the VIF test results confirm that there is no violation of the multicollinearity assumption in the model used. The existence of moderate variations between the independent variables indicates that the model estimates are reliable and panel data analysis at the provincial level can be carried out more accurately and validly. This is important to ensure that the resulting research or analysis results provide a more precise interpretation and more reliable information in supporting decisions and policy-making at the provincial level.

The next test is to test the autocorrelation assumption in the panel data model. Some literature states that panel data is similar to cross-section data because it tends to have a greater amount of cross-section data than time series data. The existence of autocorrelation can be detected through the Durbin-Watson Test which compares the calculated DW with the lower limit (dL) and upper limit (du) values of the Durbin-Watson table based on the number of observations and independent variables. Based on the results of the Durbin-

Watson test, it is known that the Durbin-Watson value is 1.694362. With the dL value at n 204 and k=8, it is 1.6861 and the dU value is 1.8522.

The conclusion is that there is no autocorrelation in the estimated model. The test results show that there is no correlation between the residual values of the model at different times in the panel data. This confirms that the assumption of non-correlation between observations at different times in panel data is met, and the model estimates can be considered more valid and reliable. Due to the absence of autocorrelation, panel data analysis at the provincial level can be carried out with more confidence, and the model estimation results can provide more accurate and reliable insights to support more precise and relevant decision-making and policy formulation.

Table 4.

Autocorrelation Test Results

Durbin Watson	1.694362

After completing the autocorrelation test and finding no violations of assumptions, the next step is to test other assumptions, namely the heteroscedasticity test. Based on the heteroscedasticity test, it is known that the variables for fertilizer subsidies, irrigation, and agricultural area show a significance value below 0.05, which indicates that there are symptoms of heteroscedasticity. Meanwhile, other variables show values greater than 0.05, so it can be concluded that there are no symptoms of heteroscedasticity. The conclusion is that there is a heteroscedasticity problem in the model built, so the standard error value is incorrect. Heteroscedasticity indicates the presence of non-constant variations in the residual variance, which can cause inaccuracies in model estimation. To overcome this heteroscedasticity problem, a model with robust standard error is used. The use of robust standard error will accommodate residual variance inconsistencies so that the model estimation results become more consistent and accurate. By using robust standard errors, model estimates can be more reliable and produce more precise interpretations in panel data analysis at the provincial level. This step is important to ensure that the resulting research or analysis results provide more valid and reliable information in supporting effective decision-making and policy formulation at the provincial level.

Table 5.

Heteroscedasticity Test Results

Variable	Sig
PPK	0.013
LNIRG	0.025
LNJDES	0.794
ALSINTAN	0.801
LNDAKP	0.790
FARMERS' EXCHANGE RATE	0.938
TOTAL POPULATION	0.510
AGRICULTURAL LAND AREA	0,000

This research was conducted at the provincial level using the Least Squares Dummy Variables (LSDV) analysis model, which indicates the existence of fixed individual effects from individual objects that cannot be observed. Each province has different characteristics in inclusive economic development in Indonesia. The fixed individual effect, which was initially a residual in the model, is considered to have a fixed value for each individual so that it becomes a dummy intercept in the LSDV model. After testing assumptions and correcting any violations of assumptions that occur, the next step is to test the hypothesis of the estimated model, either simultaneously or partially.

Simultaneous hypothesis testing is carried out to test the joint influence of all independent variables on the dependent variable. This test is often referred to as the F-test. The hypothesis proposed is H0: all independent variables together do not influence the dependent variable and Ha: there is at least one independent variable that influences the dependent variable. Next, partial hypothesis testing or t-test is carried out for each independent variable on the dependent variable. There are five independent variables in the model used, so there are five hypotheses that are built to see the influence of each variable on the dependent variable. The hypothesis proposed is H0: the independent variable has no influence on the dependent variable and Ha: the independent variable influences the dependent variable. The estimation results of the LSDV model can be seen in Table 10, which will be used in testing the hypothesis. Through this test, researchers can identify the influence of independent variables simultaneously and partially on the dependent variable, thereby providing deeper and more accurate insight into the factors that influence the level of inclusive economic development at the provincial level.

Table 6.

LSDV Model Estimation Results

Variable	Coefficient	Standard Error	t-Statistics	Probability
C	4.915976	1.456684	3.374771	0.0089
PPK	0.000070	4.58E-07	1.981178	0.0480
LNIRG	0.317362	0.069070	4.594753	0.0000
LNJDES	0.086615	0.149737	1.578450	0.0425
ALSINTAN	0.005380	8.93E-05	0.602461	0.6476
LNDAKP	0.096149	0.054117	0.776691	0.0752
FARMERS' EXCHANGE RATE	0.007685	0.003953	2.260062	0.0280
LOG (NUMBER OF POPULATION)	0.382662	0.144004	2.657297	0.0065
LOG (AREA OF AGRICULTURAL LAND)	0.035813	0.061438	3.525709	0.0005

Based on the estimation results of the OLS model, the following equation can be formulated:

IG_{it}= 4.915+ 0.000 + + + 0.096 - + + +
+
$PPK_{it} 0,317 LnIRG_{it} 0,086 LnJDES_{it} 0,005\ ALSINTAN_{it} LnDAKP_{it} 0,007\ X_{1it} 0,382\ X_{2it} 0,035\ X_{3it} \varepsilon_{it}$

IG :Inclusive Growth (Based on ADB method)

PPK :Fertilizer Subsidies

IRG :Irrigation Infrastructure

JDES :Rural Road Infrastructure

ALSINTAN :Assistance with Agricultural Tools and Machinery

DAKP : FundSpecial Agricultural Allocation

X1 : Farmer Exchange Rate Control Variable

X2 : Population Control Variable

X3 : Control Variable Agricultural Land Area

Ln :Natural Logarithms

i :Province in Indonesia

t :Year

εit : Error

The estimated parameters that are free from violations of classical assumptions are then tested statistically to test whether the hypothesis can be accepted or not. Hypothesis testing is an assumption or opinion that is accepted quantitatively to process a fact as a fact for research. Testing is carried out to determine whether the model is good or bad through the model suitability test (R2), simultaneous test (F-test), and partial test (t-test).

The R2 test is used to measure the goodness or suitability of a regression equation model. The amount of R2 is between 0 and 1, if R2 = 1 it means that all variations in the dependent variable Y can be explained by the independent variable X used in the regression model by 100%. If R2 = 0, it means that there is no variation in the dependent variable Y which can be explained by the independent variables This value can be interpreted as meaning that all the independent variables used in this research can explain the dependent variable by 97.08%.

The high R-squared value indicates that the LSDV model used is reliable in explaining the relationship between the independent variables and the dependent variable in the context of inclusive economic development at the provincial level. This shows that the model has a good ability to predict the level of gender development and empowerment and ICT development based on the independent variables used. However, it remains to be remembered that there are other factors not included in the model that can also influence the level of inclusive economic development. With a high level of reliability, this model can be a useful tool for analyzing and understanding the phenomenon of inclusive economic development at the provincial level. These results provide deeper confidence that the LSDV model provides reliable information and supports more appropriate and relevant decision-making and policy formulation at the provincial level.

The simultaneous test (F test) is intended to see whether all the independent variables in the model together can influence the dependent variable. If the probability value is less than 0.05 then all independent variables can influence the dependent variable. The following are the results of the F test in this research:

Table 7.

F Test Results

F-statistic	15.95488
Prob (F-statistic)	0.000000

Based on the results of the F test, it is known that the probability value is 0.000, where this value is smaller than 0.05, so it is known that all independent variables in this study have a simultaneous effect on the dependent variable. This indicates that the independent variables used such as fertilizer subsidies, irrigation, rural roads, equipment, and machine assistance, as well as special agricultural allocation funds as government spending in the agricultural sector, can influence the inclusiveness of economic growth.

The partial test is aimed at seeing whether the independent variables used in the model individually can influence the dependent variable. If the probability value in the partial test is smaller than 0.05 then there is an influence of the independent variable on the dependent variable. Partial test results can be seen in Table 1.

The Effect of Fertilizer Subsidies on Inclusive Growth

Based on the estimation results, it is known that the probability value of the fertilizer subsidy variable is 0.0490 with a regression coefficient of 0.00070. The probability value which is smaller than 0.05 indicates that the fertilizer subsidy variable has a positive effect on inclusive growth. This can be interpreted that every increase in fertilizer subsidies by 1 index will cause an increase in inclusive growth of 0.00070 percent with ceteris paribus assumptions for other independent variables.

Based on the analysis above, it can be concluded that the impact of fertilizer subsidies on inclusive growth is positive. This indicates that subsidies in private inputs can increase the effectiveness of using fertilizer resources. Previous studies suggest that fertilizer subsidies can encourage economic development. In the short and long term, the fertilizer subsidy policy has a positive impact on the redistribution of income and welfare of poor households, both households working in agriculture and non-agriculture who live in rural and urban areas. The increase in real income levels in groups of higher-income households in rural areas and in urban areas who are categorized as poor is followed by an increase in real income in groups of households with lower incomes. This indicates that policies aimed at increasing agricultural productivity can improve the distribution pattern of household income (Taufikurahman 2020).

The Effect of Irrigation on Inclusive Growth

Based on the estimation results, it is known that the probability value of the irrigation variable is 0.000 with a regression coefficient of 0.317362. A probability value smaller than 0.05 indicates that the irrigation variable has a positive effect on inclusive growth. This can be interpreted that every increase in irrigation by 1 index will cause an increase in inclusive growth of 0.317362 percent with ceteris paribus assumptions for other independent variables.

The results of this research show that efforts to provide irrigation infrastructure support agricultural sustainability thereby increasing inclusive growth. This is in line with research presented by Suharno (2017) which explains that by simulating increasing irrigation infrastructure by 150 percent, it can increase fiscal capacity and regional income, develop the agricultural sector, reduce inequality, and also reduce the number of poor people in rural and urban areas.

The Effect of Rural Roads on Inclusive Growth

Based on the estimation results, it is known that the probability value of the rural road variable is 0.0425 with a regression coefficient of 0.086615. A probability value greater than 0.05 indicates that the rural roads variable affects inclusive growth. This can be interpreted that every increase in rural roads by 1 index will cause an increase in inclusive growth of 0.086615 percent with ceteris paribus assumptions for other independent variables.

These results are following research conducted by Kurniawan (2018) where road infrastructure has a significant effect on per capita income. While supporting the theory of Sadono Sukirno and Faisal Basri, economic infrastructure is a driving force for the welfare of society in a region. Basir (2012) in his book emphasizes that the existence of infrastructure is a government tool for building community welfare. It can be concluded that road infrastructure is one of the factors that causes community welfare to increase. Where increasing the availability of road infrastructure takes the form of increasing quantity and improving quality. As for improving road infrastructure, people's welfare will increase, because road infrastructure will facilitate economic flow, thereby encouraging an increase in per capita income, which indicates an increase in welfare.

The Effect of Tools and Machinery Assistance on Inclusive Growth

Based on the estimation results, it is known that the probability value of the tool and machine assistance variable is 0.6476 with a regression coefficient of 0.005380. A probability value greater than 0.05 indicates that the tool and machine assistance variable does not affect inclusive growth. So, it can be interpreted that every increase in tool and machine aid by 1 index will not cause an increase in inclusive growth.

The results of this research show that the assistance of various tools and machines used in agricultural businesses before and after harvest does not affect inclusive growth. The use of agricultural machinery at the farmer level is not yet optimal. The reason is that the agricultural machinery that is distributed does not suit the needs of farmers, is not compatible with the local agroecosystem, there is a lack of skilled operators, and it is still only used for Poktan itself (Suryana et al. 2017). Another reason is the lack of operational costs and the lack of information support regarding planting schedules in one area (Hermantoet al. 2018). In other cases, government machinery assistance killed individual or private machinery service businesses that already existed (Hermanto et al. 2016). Many factors determine the success of implementing a mechanization program, namely the use of agricultural tools and machinery (Alsintan) in the field.

The Influence of Special Agricultural Allocation Funds on Inclusive Growth

Based on the estimation results, it is known that the probability value of special allocation funds for agriculture is 0.0752 with a regression coefficient of 0.096149. A probability value greater than 0.05 indicates that the special allocation fund variable for agriculture does not affect inclusive growth. So, it can be interpreted that every increase in special allocation funds for agriculture by 1 index will not cause an increase in inclusive growth.

The results of this research show that special allocation funds for agriculture do not affect inclusive growth because the funds allocated in the APBN to certain regions to help fund activities to fulfill infrastructure in the agricultural sector have not been used optimally. According to the results of a study (White Paper) from Bappenas (2011), which looked at the extent to which development indicators have been achieved from DAK funds allocated to each region, with GRDP as an indicator of growth, looking at the DAK allocation in various fields in terms of fiscal capacity, the results were obtained that DAK The agricultural sector has a positive but not significant effect on regional economic growth. It was further explained that the allocated DAK will be meaningless if it is not followed by good policies that regulate it.

The Influence of Control Variables (Farmer Exchange Rate, Population, and Agricultural Land Area) on Inclusive Growth

The control variables used in this research include the farmer's exchange rate, population, and agricultural land area. The probability value of the farmer's exchange rate is 0.0280 with a regression coefficient of 0.007685. The probability value which is smaller than 0.05 indicates that the farmer exchange rate variable has a significant negative effect on inclusive growth. So it can be interpreted that every increase in the farmer's exchange rate by 1 index will cause a decrease in inclusive growth of 0.007685 percent with ceteris paribus assumptions for other independent variables. The research results show that farmers' exchange rates affect inclusive growth. This is because the level of exchange power or purchasing power of farmers regarding the products purchased or paid for by farmers, namely products and consumer goods, can increase inclusive growth. The higher the farmer's exchange rate, the better the farmer's purchasing power for consumer products so that farmers will be more prosperous.

The probability value of the population variable is 0.0065 with a regression coefficient of 0.382662. A probability value smaller than 0.05 indicates that the population variable has a positive effect on inclusive growth. This can be interpreted that every increase in population by 1 index will cause an increase in inclusive growth of 0.382662 percent with ceteris paribus assumptions for other independent variables. The research results show that population affects inclusive growth. This is because as the population increases in Indonesia, the need for food will increase so the population demand will increase and increase inclusive growth.

The probability value of agricultural land area is 0.0005 with a regression coefficient of 0.35813. A probability value smaller than 0.05 indicates that the agricultural land area variable has a significant negative effect on inclusive growth. So it can be interpreted that every increase in agricultural land area by 1 index will cause a decrease in inclusive growth of 0.35813 percent with ceteris paribus assumptions for other independent variables. So it can be concluded that the three control variables in this study affect inclusive growth. The research results show that agricultural land area affects inclusive growth. This is because increasing land area will increase farmer productivity it will increase inclusive growth. If the land area decreases, it will eliminate farmers' livelihoods and disrupt national food security due to decreased food production due to reduced agricultural land.

CONCLUSION

In general, government spending in the agricultural sector has a positive and significant impact on inclusive economic growth in Western Indonesia. Aspects of government spending in the agricultural sector that have a positive influence on the inclusiveness of economic growth in Western Indonesia are subsidies for fertilizer, irrigation, and rural roads. The factor that has the greatest positive influence on inclusive growth is irrigation. However, the variables agricultural machine tools and agricultural DAK do not show a significant relationship with inclusive economic growth in Western Indonesia. This is related to the new types of tools provided in the land processing process, not yet comprehensively from the initial process to post-harvest, and the distribution of machine tools there are inaccuracies in requirements. This means that there are areas that are suitable for your needs, there are also more suitable areas, and there are also areas that are less. Apart from that, the socialization of policies on the use of agricultural DAK has not been optimal so the realization of agricultural DAK in each region is low. Provinces with average inclusive growth rates of medium to high are DKI Jakarta, East Java, Riau Islands, Bangka Belitung Islands, North Sumatra, and DIY Yogyakarta. Meanwhile, provinces in the lower middle category are Aceh, Bengkulu, Lampung, and West Kalimantan.

REFERENCES

[ADB] Asian Development Bank. (2011). Framework of Inclusive Growth Indicators 2011: Key Indicators for Asia and the Pacific Special Supplement. Manila (PH): ADB.

Ali I, Son HH. (2007). Defining and Measuring Inclusive Growth: Application to the Philippines. Mandaluyong City (PH): Asian Development Bank.

Ali I, Zhuang J. (2007). Inclusive Growth Toward a Prosperous Asia: Policy Implications, Economics and Research Department Working Paper No. 97. Mandaluyong City (PH):

Arsyad L. (1999). Introduction to Regional Economic Planning and Development, First Edition. Yogyakarta: BPFE Yogyakarta.

Asongu SA, Nwachukwu JC. (2016). The role of governance in mobile phones for inclusive human development in Sub-Saharan Africa. Technovation 55, 1–13. https://mpra.ub.uni-muenchen.de/73089/1/MPRA_paper_73089.pdf.

Baransano, MA, Putri, EIK, Achsani, NA, & Kolopaking, LM. (2016). Analysis of Factors Affecting Regional Development Disparity in the Province of West Papua.

Christie T. (2012). The effect of government spending on economic growth: Testing the non-linear hypothesis. Bull. Econ. Res. 66(2), 183–204.

Donaldson, L. (1984). Economic Development Analysis and Policy. West Publishing Company. New York.

Fosu A. (2009). "Inequality and the impact of Growth on poverty: Comparative Evidence for

Guritno M. (1999). Public Economics. Yogyakarta: BPFE.

Habito C. (2009). Patterns of Inclusive Growth in Developing Asin: Insights from an Enhanced Growth-Poverty Elasticity Analysis. Tokyo (JP): Asian Development Bank Institute (ADB) working paper series No. 145.

Jhingan ML. (2008). Development and Planning Economics. Raja Grafindo Persada. Jakarta

Kakwani, N., EM Pernia. (2000) 'What is Pro-Poor Growth?'. Asian Development Review 18(1): 1-16.

Kuncoro M. (2006). "Development Economics", Salemba Empat Publishers. Jakarta.

Lazear Edward P, Rosen Sherwin. (1981). "Rank-Order Tournaments as Optimum Labor Contracts." Journal of Political Economy. University of Chicago Press, vol. 89(5) pages 841-864, October.

Mangkoesoebroto, G. (2000). Public Economics. Publishing Agency of the Faculty of Economics. Yogyakarta.

McKinley. (2010). Inclusive Growth Criteria and Indicators: An Inclusive Growth Index for Diagnosis of Country Progress. ADB Sustainable Development Working Paper Series, 2. Manila, Philippines: Asian Development Bank.

Musgrave RA, Peggy BM. (19890. Public Finance in Theory and Practice. McGraw-Hill Book Company. New York.

Norton RD. (2004). Agricultural Development Policy: Concepts and Experiences. John Wiley and Sons Ltd. England.

Oluseye IC, Gabriel AA. (2017). Determinants of inclusive growth in Nigeria: An ARDL approach. Am. J. Econ. 7(3), 97–109.http://article.sapub.org/10.5923.jeconomics-20170703.01.html.

Panjaitan HA. (2019). Analysis of the Impact of Infrastructure Development on Inclusive Economic Growth in North Sumatra Province [Thesis]. Bogor (ID): Bogor Agricultural Institute.

Rustiadi E, Saefulhakim S, Panuju DR. (2011). Regional Planning and Development. Jakarta (ID): Indonesian Obor Foundation

Samuelson Paul A, William D. Nordhaus. (1994). Macroeconomics. Fourteenth Edition, Jakarta: Erlangga.

Supriatna, J., Djumarno, D., Badawy Saluy, A., & Kurniawan, D. (2023). Agriculture MSMEs Sustainability Farmers Exchange Rates in Indonesia During the Covid-19 Pandemic and Farmer Empowerment Solutions. *Indonesian Interdisciplinary Journal of Sharia Economics (IIJSE)*, *6*(1), 232-253. https://doi.org/10.31538/iijse.v6i1.2756

Tambunan T. (2003). Indonesian Economy. Some Important Issues. Ghalia Indonesia: Jakarta.

Todaro MP, Smith SC. (2006). Economic Development. Ninth Edition. Munandar H, translator; Bernadi D, editor. Jakarta (ID): Erlangga. Translation of Economic Development. Ninth Edition.

World Bank. (2009). Indonesia Agriculture Public Expenditure Review - Indonesia Agriculture Public and Growth. Policy Notes. The World Bank Office Jakarta.