

The Effects of Consumption, Private Investment, and Government Expenditures on Economic Growth in South Sulawesi, Indonesia

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Abstract

Economic growth of one country is affected by many factors. This study was aimed to explain the effects of consumption, private investment, and government expenditures on economic growth in South Sulawesi, Indonesia either simultaneously or partially. The sources of data had been recorded from publications issued by the Central Statistics Agency and Investment Promotion Agency in the period 2001-2010. The techniques used to address the problem were a multiple linear regression analysis and a classical test assumption. The research findings indicated that simultaneously, household consumption, private investment, and government expenditures had significant and positive effects on the economic growth, either simultaneously or partially. Then, based on the classical assumption analysis, the results showed that the regression equation model was appropriate in predicting variables of economic growth as the dependent variable, because of the four classical analysis assumptions (normality, autocorrelation, heteroscedasticity, and multicollinearity test obtained a non-biased test value. It was concluded that an increase in consumption, private investment and aggregate demand from year to year could boost the economic growth. The government is expected to issue a new policy that could encourage both domestic investors and foreign investments in areas, so that economic growth could be improved.

Keywords: consumption, investment, expenditures, economic growth

1. Introduction

Economic growth is one of the important indicators to analyze the economic development of a country. "Growth" is not synonymous with "development". Economic growth is one of the requirements of the many requirements needed in the development process. Economic growth is only recorded as the increase in production of goods and services nationally, while the broader dimension of development is a process of change towards the continuous improvement of development. It is a country's economic problems in the long run. It is the development of an economy achievement of the period to the next. From one period to another the ability of a country to produce goods and services will increase, due to the factors of production that are always experiencing the increase in the number and quality.

Economic growth is a process, so it is not an economic picture at some point, but look at the dynamic aspects of an economy, to see how the economy evolves or changes from time to time. Aspects of output per capita should be viewed in terms of total output divided by the population. Aspects of long-term time perspective, see the tendency for economic growth in the very long term (Boediono, 1992). Then, economic growth is used as a generic term that describes the level of development of a country is measured by the increase of the real opinion. "Economic Development is Change Growth Plus" means that economic development is the economic growth followed by changes in the structure and pattern of economic activity (Sukirno, 1996).

The development of technology is the basis for the continuity of a sustainable economic growth coupled with other factors. To realize the potential inherent in the technology, we need to hold institutional adjustment, attitudes, and technologies (Todaro, 2000). Economic growth is the key macroeconomic objectives. This is based on three reasons. First, the population is always increasing. This population growth also means that the labour force will increase. Economic growth will be able to provide employment to the labour force. If the economic growth that can be created is smaller than the growth of the labor force will push the unemployment. Second, the unlimited wants and needs of the economy should be able to produce more goods and services to meet the needs and requirements. Third, the practice of creating economic equity (economic stability) through the levy of income (income redistribution) will be more easily achieved in a period of high economic growth.

The development in South Sulawesi, Indonesia has continuously been improving the economy. Achievement of development outcomes are strongly felt by community as a development aggregate of 24 regencies in South Sulawesi, which is inseparable from the endeavor jointly between government and society. But on the other hand the obstacles in maximizing the potential of human resources and capital resources are still faced by policy makers at the provinces. Consumption can drive the development of the economy with the increase of aggregate

demand by the public, but it is also the number of consumption expenditure to the welfare of the size that will ultimately boost economic growth. However, not all people can meet their consumptions well. Different income levels lead to different patterns of consumption expenditure as well.

Investment is also an important determinant of economic growth. Investment has an important role for the state. Investment in economic development has two important roles. First, the impact on aggregate demand which will drive economic growth. Second, the effects on capital formation. Investments will add a variety of equipment, machinery, buildings, and so on. In the long term it will have an effect on increasing output and sustained growth. The efforts to increase capital investment is important for Indonesia in general. Today, businesses are experiencing hardship of little significance. The developments of domestic capital and foreign capital tend to fluctuate. In this area, South Sulawesi province, foreign direct investment has larger enough quantities than domestic investment.

There are a few things that actually affect the investment. Investments alone are affected by foreign and domestic investments. Investment that occurs in the area consists of government investment and private investment. Government investment is done in order to provide public goods. Investment from the private sector can come from within the country and abroad. The amount of government investment can be calculated from the difference between total government budgets by shopping routine.

Government spending as a whole is very important in its contribution to regional development. but the determination is also important for the composition and the government spending. The composition of government spending is a strategy to achieve the goals and development of the area. Realization of local government expenditure is direct expenditures and indirect expenditures.

The problem of this study is to ask a question about the effects of the independent variables on economic growth as the dependent variable. Therefore, this study has an objective to explain the effects of household consumption, private investment and government expenditures towards economic growth in South Sulawesi province, Indonesia either simultaneously or partially. Another objective is to determine the most dominant effect of the given variables on economic growth.

2. Literature Review

Keynes theory relies statistical analysis, and also makes allegations about consumption based on introspection and casual observation. First and foremost, Keynes assumes that the marginal propensity to consume (marginal propensity to consume) the amount consumed in any additional income is between zero and one. Marginal propensity to consume is crucial to Keynes's policy recommendations to reduce widespread unemployment. Power of fiscal policy to influence the economy as indicated by the fiscal policy multiplier arises from the feedback between income and consumption. Second, Keynes states that the ratio of consumption to income, which is called the average propensity to consume (average propensity to consume), falls as income rises. He believes that saving is a luxury, so he expects the rich to save a higher proportion of their income than the poor. Third, Keynes argues that income is an important determinant of consumption and interest rates have an important role. For example, population income is one of the significant factors of electricity consumption. Keynes states that the effect of interest rate on consumption is only a theory. The conclusion that the effect of short-term interest rate to the individual expenditure of income is secondary and relatively unimportant (Bekhet, 2011; Soediyono, 2000).

Theory of Consumption to permanent income hypothesis proposed by Friedman. According to this theory people's income can be classified into two, namely the permanent income and temporary income. Notion of permanent income is income that is always welcome in any given period and can be predicted, for example, income from salaries, wages and income earned from all of the factors that determines a person's wealth. Definition of temporary income is income that can not be predicted in advance (Mangkoesobroto, 1998).

Theory with the hypothesis put forward by Modigliani's life cycle explains the pattern of consumption expenditure based on the fact that the pattern of receipts and expenditure patterns of consumption in general is influenced by a person's period in its life cycle. Because people tend to receive income/ low income at a young age, high in the low to middle age and old age, the savings ratio will fluctuate in line with the development of the young people, their age would have a negative saving (dissaving), middle-aged people save and pay back the loan on their youth, and old age people will take the savings made in the middle ages. Further essential Modigliani assumes the role of wealth (assets) as a determinant of consumption behaviour. Investment is one of the engines of economic growth. Investment can be attracted in an environment having rich and colorful life, better industrial base, complete structure, and more job opportunities. (Zhao & Liu, 2010).

Investment has a strategic role in the economic growth process (Jhingan, 2008). Thus, this investment will be able to: (1) create revenue, through increased output, (2) increase the production capacity by increasing the stock of capital. Investing is a resource / capital accumulation which is prepared and used in the present through a variety of processes in the economy in the hope of getting a result in the future in order to stimulate economic

growth (Eduardus, 2001).

Good governance is crucial for economic performance (Zouhaier, 2011). There are some views that explain the relationship between government spending and economic growth; a view of the theory includes Banuso and Auditor, Adolph Wagner, Rostow and Musgrave, Peacock and Wiseman, and Keynes's view. The significance of government's expenditure is crucial since falling government consumption in one country can be glimpsed from rising incidence of mass unemployment, rising price of goods and services (inflation), high debt burden on the part of the government, unstable exchange rate, and among others (Banuso & Odior, 2012). Furthermore, according to empirical observations of Adolph Wagner to European countries, USA and Japan in the 19th century, the government activity in the economy tends to increase (law of ever increasing state activity). Wagner measures the ratio of government expenditure to national income. Wagner argues that the law will lead to economic growth in the relationship between industries, industrial-society, and it will be more complicated and complex, so it has the potential for market failure and the greater negative externalities (Mangkoesebroto, 1998). Rostow and Musgrave link the government spending to the stages of economic development. In the early stages of economic development, the ratio of public investment to total investment, or in other words the ratio of government expenditure to national income is relatively large. This is because at this early stage the government should provide infrastructure.

Government investment in intermediate stages of economic development is still needed to spur economic growth in order to still be able to take off. Together with that portion of the private sector is also being increased. The role of government remains large at this stage due to the many market failures occur that are caused by economic development itself. Many cases of negative externalities, such as pollution of the environment which requires the government intervene to resolve it.

Peacock and Wiseman argue that economic development has increased the tax levy, the tax rate has not changed though in turn it leads to increase government spending as well. So under normal circumstances, the increase in national income also increase both revenue and government spending, if normal circumstances are disturbed, for example, because of the war and other externalities, the government was encouraged to increase spending to overcome the disorder in question. Consequently, the demand arises to gain greater tax revenue. Tax levy greater cause of private funds for investment and working capital decreases. This effect is called the substitution effect.

Based on Keynes's view, the balance of the national income identity $Y = C + I + G + X - M$ is a source of legitimized view of the relevance of the Keynesian government intervention in the economy (Dumairy, 1996). Many considerations underlie decision-making in managing expenses. The government does not quite reach the ultimate goal of every expenditure policies, but it also takes into account the objectives affected by the policy. To enlarge expenses solely with the objective to increase national income or expanding employment opportunities is not sufficient, but it must also be taken into account that will be employed or increased for the income. The government also needs to increase its role in the economy in order not to weaken private sector activity.

3. Methods and Materials

The variables included the variables selected with a basic understanding or concept of operations. The variables consisted of household consumption, investment, and government expenditure. Household consumption was the sum of consumption expenditures, both food and non-food forms. Realizable value included domestic investment and foreign direct investment. Government expenditure realization consisted of direct expenditures and indirect expenditures. Direct expenditure was budgeted expenditures directly related to the implementation of programs and activities. While indirect spending was budgeted expenditures not directly related to the implementation of programs and activities.

Data collection was done by way of recording data sourced from publications issued by the Central Statistics Agency, and Investment Promotion Agency, and the official publication of the government and by means of a literature study and journals related to the problem research. Analysis techniques are used to address the problem/ hypothesis in this study was a multiple linear regression analysis. Regression Analysis is the dependent variable with one or more independent variables (explanatory variables / free) in order to estimate and / or predict the population mean or average value of the dependent variable based on the value of the independent variables are known (Gujarati, 2003).

Dependent variable estimation technique used is Ordinary Least Square (OLS) regression line is estimated by minimizing the sum of squared errors every observation of the line (Ghozali, 2005). Specification of the model used in this research is to use the model, as follows:

$$Y = f(C, DI, FI, G) \quad (1)$$

From the equation 1, based on the modification of the model in logarithmic form so that the purpose of the research to be conducted

$$Y = \beta_0 + \beta_1 C + \beta_2 DI + \beta_3 FI + \beta_4 G + e \quad (2)$$

The meanings of symbols used in the formula are as follows: Y (Economic Growth); C (Household Consumption); DI (Actual value of Domestic Investment); FI (Actual value of Foreign Investment); G (Direct Expenditures); e (Error term); β_0 (Constant); β_1 (Coefficient Household Consumption); β_2 (Coefficient Domestic Investment); β_3 (Coefficient Foreign Investment); and β_4 (Coefficient of government spending).

The classical assumptions used in this study (Santoso, 2004) were as follows:

- Normality Test which aimed to test whether a regression model, the dependent variable, the independent variable or both had a normal distribution or not. Regression model is the distribution of data either normal or near normal (Ghozali, 2005)
- Autocorrelation test which was defined as the correlation between members of series of observations which are sorted by time (as in time series data) or space (as in a cross sectional). To detect the presence or absence of symptoms of autocorrelation in regression analysis model, the Durbin-Watson statistic could be used by comparing the value of the Durbin-Watson statistic with the upper limit value (dU) and a lower bound (dL) of the table on the number of observations (n), number of independent variables (k), and a significant level of 5%, with the following conditions (Ghozali, 2005):

If: $d < dL$ = There is positive autocorrelation;
 $d > 4-dL$ = There is a negative autocorrelation;
 $dU < d < 4-dU$ = There is no autocorrelation;
 $dL \leq d \leq dU$ or $4-dU \leq d \leq 4-dL$ = area of doubt;
 dL = Durbin Watson table at the lower limit;
 dU = Durbin Watson table at the upper limit;

- Heteroscedasticity test which was a situation where bullies fault (error) of each independent variable do not all have the same variance. These symptoms may arise from a cross section of data observations. How to detect the symptoms of this include using a test of Spearman rank correlation (R_s) is formulated as follows (Gujarati, 1997):

$$R_s = 1 - 6 \left[\frac{\sum di^2}{N(N^2-1)} \right] \quad (3)$$

Where:

di = difference in rank (E_i) with the rank of X_i

N = number of samples

These symptoms can be seen by comparing the tables t and t where t can be found using the formula:

$$t = \frac{rs\sqrt{N-2}}{\sqrt{1-rs^2}} \quad (4)$$

If the result of the comparison table t and t (df = N-2) showed t is greater than t table means H_0 is rejected and H_1 is accepted. This condition indicates heteroscedasticity symptoms. But are used to enhance this model is to transform the original model into a new model that has a value of e with constant variance.

- Multicollinearity test which was used to test whether or not the regression model found a correlation among the independent variables. If there was a correlation, then there was a problem called Multicollinearity. Good regression models should not happen at the correlation among the independent variables. To determine whether or not multicollinearity was done by calculating the value of the Tolerance and Variance Inflation Factor (VIF) (Ghozali, 2005).

Decision criteria:

- If the tolerance value was less than 1 then there was no multicollinearity.
- If the tolerance value was more than 1 then there was multicollinearity.
- If the VIF value was less than 10 then there was no multicollinearity.
- If the VIF value was more than 10 then there was multicollinearity.

Based on the hypothesis testing, the arguments were presented as follows:

- Partial hypothesis test, it tested this hypothesis using the t test (t-test), where the value of t-test compared with the table value of t at a certain confidence level. The test statistic t is as follows:

$$t = \frac{\beta_1 - \beta_1}{Sn(\beta_1)} \quad (5)$$

The null hypothesis was rejected if the value was greater than the table t and vice versa if the value was smaller than the t table value, the null hypothesis was accepted. While to examine the relationship among the variables was the value of the partial correlation coefficient (r^2) and the coefficient of determination (R^2). Partial correlation coefficient reflects the ability of the independent variables in explaining the variation or change in the dependent variable. While the coefficient of determination reflected the ability of the independent variables in explaining the variation simultaneously or change of the dependent variable.

- Simultaneous hypothesis testing (simultaneous), it tested this hypothesis using the F test (F-test) where

the value of F-test compared with the value of F table at a certain confidence level. Of the F-test could then be decided to accept or reject the hypothesis. The F test statistic was as follows:

$$F = \frac{R^2/k}{(1-R^2)(n-k-1)} \quad (6)$$

If the calculated F value was greater than the F table value, the null hypothesis was rejected (H_1 accepted) means significant.

4. Results and Discussion

This study has an objective to explain the effects of household consumption, private investment and government expenditures towards economic growth in South Sulawesi province, Indonesia either simultaneously or partially. Based on the calculation results of the regression model analysis, the effects of these variables are shown in the following table.

Table 1. Effects of Household Consumption Estimates, Actual Domestic Investment, Foreign Investment and Actual Expenditures on period 2001-2010

Variables	Coefficients	Standard errors	tsg	Prob sig
Constants	2.807	0.443	6.327	0.000
X1	0.655	0.053	12.415	0.000
X2	0.032	0.012	2.696	0.022
X3	0.003	0.009	0.305	0.766
X4	0.218	0.042	5.160	0.020
R		0.997		
R ²		0.994		
Sig. F		0.000		
F count		412.012		
F table		6.22		
A		0.05		
N		15		

Sources: Data processed, 2011

Based on the data obtained R value of 0.997 and R² value of 0.994, while the F value of 0.000, so that the regression equation is:

$$Y = 2.806 + 0.655 X_1 + 0.032 X_2 + 0.003 X_3 + 0.218 X_4 + e$$

It can be explained that the equation indicates a significant figure in the household consumption variable (X_1), the realization of domestic investment (X_2), the realization of foreign investment (X_3) and the realization of government spending (X_4), while the interpretations of the equation are offered as follows:

- $\beta_0 = 2.806$
 This constant value indicates that if there is no variable household consumption, realization of domestic investment, realization of foreign investment and government spending of (X_1 , X_2 , X_3 , and $X_4 = 0$, constant), then the rate of economic growth will rise by 2.806 percent.
- $\beta_1 = 0.655$
 Parameter values or regression coefficient β_1 shows that every variable of household consumption rises 1 percent, the economic growth will increase by 0.655 percent, or in other words every variable needs economic growth in household consumption of 0.655, assuming other variables remain (X_2 , X_3 , and $X_4 = 0$) or Ceteris Paribus.
- $\beta_2 = 0.032$
 Parameter value or the regression coefficient β_2 shows that each variable realization of domestic investment by 1 percent, the economic growth will increase by 0.032 percent, or in other words every variable needs economic growth of domestic investment realization of 0.032, with assuming other variables remain (X_1 , X_3 , and $X_4 = 0$) or Ceteris Paribus.
- $\beta_3 = 0.003$
 Parameter values or regression coefficient β_3 shows that each variable of foreign direct investment increases by 1 percent, the economic growth will increase by 0.003 percent, in other words, any increase in economic growth needs variables of realized foreign direct investment (FDI) amounted to 0,003, assuming other variables remain (X_1 , X_2 , and $X_4 = 0$) or Ceteris Paribus.
- $\beta_4 = 0.218$
 Parameter values or regression coefficient β_4 shows that each variable is government spending increased by 1 percent, the economic growth will increase by 0.218 percent, or in other words, any increase in economic growth in government spending variables needs for 0.218, assuming other variables remain (X_1 ,

X_2 , and $X_3 = 0$) or Ceteris Paribus.

4.1 Classical Assumption Testing

To obtain an unbiased estimate of the value, then testing the classical assumptions on the data have been obtained. The results obtained from tests performed on the data can be explained as follows:

4.1.1. Normality Test

Normality test is used to test whether the regression model, the independent variables and the dependent variable, both are normally distributed or not, then this test uses SPSS version 17.0. Normality of the data in the study is seen by looking at the spread of the data (dots) on the Normal P-Plot of Regression Standardized Residual of the dependent variable. Requirements of data normality test is if the data is spread around the diagonal line and follow the direction of the diagonal line, then the regression model meets the assumption of normality. If the data are spread away from the diagonal line and/or do not follow the diagonal line, then the regression model does not meet the assumption of normality.

Based on the results of data processing, the results are obtained that all the data are distributed normally and there is no deviation, so the collected data can be processed by the next methods. This can be proved by considering the distributions of data spread around the diagonal line on the "Normal P-Plot of *Standardized Residual Regression* " according to the image below, so it can be said that the regression model in this study has distributed normally.

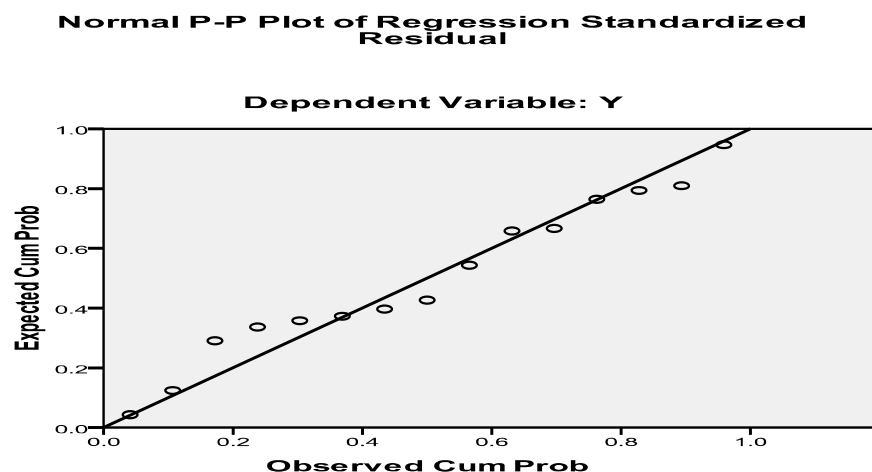


Figure 1. Normal P-Plot of Regression Standardized Residual
 (Sources: Data Imaging Results, 2011)

4.1.2. Autocorrelation test

The assumption of autocorrelation is defined as the correlation between the observational data, where the data are influenced by the emergence of previous data (Gujarati, 1999). The existence of an autocorrelation contradicts one of the basic assumptions of multiple regression that is no correlation between the randomness tool, meaning if there is autocorrelation, it can be said that the correlation of coefficients obtained is less accurate. Autocorrelation which is used to determine the Durbin-Watson test can be seen from the results of multiple regression test. Conventionally it can be said that a regression equation is said to have met the assumption of autocorrelation if the value of the Durbin-Watson test is approaching two or more.

Statistical data obtained using 17.0 software and DW on Test value autocorrelation using the Durbin-Watson test, data processing can be shown in the following table:

Table 2. Durbin-Watson and Autocorrelation

Durbin-Watson	Interpretations
1.21 <DW <1.65	Can not be concluded
2.35 <DW <2.79	Can not be concluded
DW <1.21	Autocorrelation occurs
DW > 2.79	Autocorrelation occurs

Sources: Data processed, 2011

Based on the Durbin-Watson value obtained for 2.344, then the regression model does not happen in autocorrelation.

4.1.3. Heteroscedasticity Test

The Results of analysis using SPSS 17.0 note that the points are spread randomly either above or below zero, the Y-axis and does not form a particular pattern or trend in the plot diagram, so it can be identified that does not happen existence of heteroscedasticity and the regression models used to predict variable of economic growth.

So, it can be concluded that the overall regression model qualified classical assumption is in the form of logarithm.

More details can be seen in the following figure:

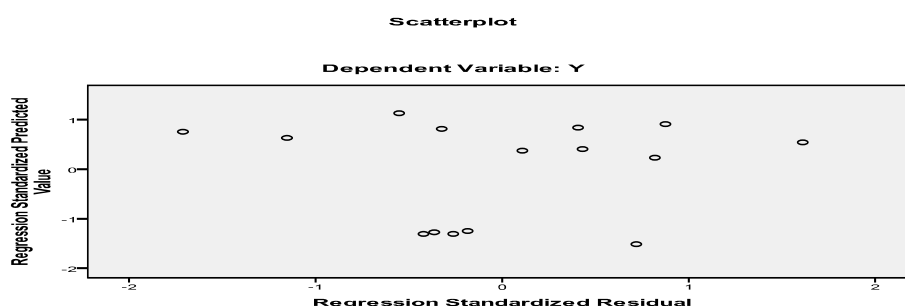


Figure 2. Scatterplot (Source: Data Imaging Results, 2011)

4.1.4. Multicollinearity Test

To determine the possibility of multicollinearity can be done by looking at the value of tolerance and the value of Variance Inflation Factor (VIF). If the tolerance value is less than 1, then there is multicollinearity. Then if the VIF value is less than 10, then there is no multicollinearity, otherwise if the VIF value is more than 10, then there is multicollinearity.

The results of the data output from the VIF value of household consumption variable (X_1), the realization of Domestic Investment (X_2), the realization of foreign investment (X_3), and the realization of government spending (X_4) are 5.498; 1.511; 1.263, and 5.759, respectively. This means that the value of $VIF < 10$, the values of tolerance in the four variables are 0.182; 0.662; 0.792; are 0.174. This means the tolerance values > 0.1 . With conditions as above, the results for multicollinearity test hypothesis is that in this regression model there is no multicollinearity problem.

Table 3. Explanation of Multicollinearity Test

Variables	Value		Information	Status
	Tolerance	VIF		
X_1	0.182	5.688	$VIF < 10, Tol > 0.1$	H_1 is accepted
X_2	0.662	1.916	$VIF < 10, Tol > 0.1$	H_1 is accepted
X_3	0.792	1.268	$VIF < 10, Tol > 0.1$	H_1 is accepted
X_4	0.174	7.881	$VIF < 10, Tol > 0.1$	H_1 is accepted

Sources: Data processed, 2011

4.2. Hypothesis Testing Results

4.2.1. Test R^2 (Coefficient of Determination)

SPSS 17.0 output processing appears that the coefficient of determination or R Square of 0.994. This means that 99.4% the economic growth variable can be explained by the independent variables, namely household consumption (X_1), the realization of domestic investment (X_2), the realization of foreign investment (X_3), and government spending (X_4). While the remaining 0.6% economic growth rate is explained by other variables, beyond the four independent variables.

Standard error value of the estimate is 0.061451. The smaller the value of the Standard Error of Estimate will be the better, because it shows the appropriate regression equation models in predicting the economic growth as the dependent variable. In this regression, the Standard Error of Estimate shows a fairly low value, it means that the exact model of the regression equation is appropriate to use for predicting the economic growth variable.

4.2.2. Partial Regression Test (t test)

Table 4. t-Test Explanation

Variable	t-count	t-table	Prob.	Information
X_1	12.415	1.770	0.000	H_0 is rejected/ H_1 is accepted
X_2	2.696	1.770	0.022	H_0 is rejected/ H_1 is accepted
X_3	0.305	1.770	0.766	H_0 is accepted/ H_1 is rejected
X_4	5.160	1.770	0.000	H_0 is rejected/ H_1 is accepted

Sources: Data processed, 2011

4.3. T-test Results of the Independent Variables

T-test results of the independent variables can be explained in detail as follows:

4.3.1. Household consumption (X_1)

From the results of regression, the t value is obtained for household consumption of 12.415 and the t table with a significance level of 95% ($\alpha = 5\%$), $df = 11$, obtained 1.770. It is clear that the *count* t is greater than the critical t,

then H_0 is rejected which means that household consumption significantly influences economic growth in the given area.

Based on probability, then if the probability is greater than 0.05 then H_0 is accepted and if the probability is less than 0.05 then H_0 is rejected. From the calculation of unknown sig. or *significance* probability is 0.000 or it is far below 0.05, then H_0 is rejected, meaning that the household consumption significantly influences the economic growth of the period.

4.3.2. Realization of Domestic Investment (X_2)

From the results of regression, the t value is obtained for the realization of domestic investment of 2.696 and the t table with a significance level of 95% ($\alpha = 5\%$), $df = 11$, obtained 1.770. It is clear that the *count* t is greater than the critical t, then H_0 is rejected which means that the realization of domestic investment significantly influences the economic growth.

Based on probability, then if the probability is greater than 0.05 then H_0 is accepted and if the probability is less than 0.05 then H_0 is rejected. From the calculation of unknown sig. or *significance* probability is 0.022 or far below 0.05 then H_0 is rejected it means that realization of domestic investment significantly influences the economic growth.

4.3.3. Realized Foreign Investment (X_3)

From the results of regression, the t value is obtained for the realization of foreign investment amounted to 0.305 and the t table with a significance level of 95% ($\alpha = 5\%$), $df = 11$, obtained 1.770. It is clear that the *count* t is smaller than the critical t, then H_0 is accepted which means that the realization of foreign investment does not significantly influence the economic growth.

Based on the probability, if the probability is greater than 0.05 then H_0 is accepted and if the probability is less than 0.05 then H_0 is rejected. From the calculation of unknown sig. or 0.766 or probability of *significance* is well above 0.05 then H_0 is accepted it means the realization of foreign investment does not significantly influence the economic growth.

4.3.4. Government Expenditure (X_4)

From the result of regression, the t value is obtained for the government spending of 5.759 and a t table with a significance level of 95% ($\alpha = 5\%$), $df = 11$, obtained 1.770. It is clear that the *count* t is greater than the critical t, then H_0 is rejected which means that government spending significantly influences the economic growth.

Based on probability, then if the probability is greater than 0.05, H_0 is accepted and if the probability is less than 0.05, then H_0 is rejected. From the calculation of unknown sig. or *significance* probability is 0.000 or far below 0.05 then H_0 is rejected. It means government spending significantly influences the economic growth.

4.4. Regression Testing is Simultaneous (Test F)

Based on Table 1, the F value of 412.012 is obtained. Level of significance of the data is 0.000 which is smaller than 0.05, meaning regression model can be used to predict the dependent variable (Y). With a confidence level of 95% ($\alpha = 0.05$), it is obtained that *count* F > *table* F with a 412.012 score > 6.22. It means that the H_0 hypothesis and H_1 is accepted, that in this test household consumption variable (X_1), the realization of domestic investment (X_2), the realization of foreign direct investment (X_3), and government spending (X_4), together or simultaneously have a significant impact on the economic growth.

There are three significant variables affecting economic growth in South Sulawesi is the variable of household consumption, private investment and government expenditure. However foreign investment variable does not significantly affect the growth. Economic growth in South Sulawesi when compared to economic growth in Eastern Indonesia is quite high for the average to 6,9% over the last ten years (2001-2010) while the Eastern part of Indonesia that covers ten provinces averaged only 4,3% to the same period. Even when compared to the national average growth in the period 2008-2010 reaching only 6,2% South Sulawesi still higher.

5. Conclusion

The three independent variables which consist of consumption, domestic investment, and government expenditures simultaneously have significant and positive effects on economic growth. This is indicated by an increase in consumption, private investment and aggregate demand from year to year that can drive the economic growth. Regression testing results indicate that household consumption is the most dominant factor that affects the economic growth, because of the large aggregate demand, so that Gross Regional Domestic Income will rise and ultimately boost economic growth. Actually, consumption is also affected by the amount of income and purchasing power. Thus, the local government is expected to issue a new policy that can encourage investment in areas both domestic investors and foreign investors, so that the government can improve the regional economic growth. In this case, the role of domestic and foreign investments needs to be driven by an increase of investment conducive situation, the formation of an integrated service unit for ease of service creation and investment business license.

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References

- Banuso, Fadiya Bemidele & Odior, Ernest Simeon. (2012), "Macroeconomic Volatility and Government Consumption Expenditure Implication for Public Welfare A Dynamic Macroeconometric Stochastic Model" *International Journal of Economic Finance*, Vol. 4, No. 2. 140-151.
- Bekhet, Husain Ali. (2011), "Assessing the Elasticities of Electricity Consumption for Rural and Urban Areas in Malaysia: A Non linear Approach", *International Journal of Economic Finance*, Vol.3, No.1. 208-217.
- Boediono. (1992), "Teori Pertumbuhan Ekonomi (Theory of Economic Growth)", *BPFE-UGM*, Yogyakarta.
- Dumairy. (1996), "Perekonomian Indonesia (Indonesian Economy)", *Erlangga*, Jakarta.
- Eduardhus T. (2001), "Analisis Investasi dan Manajemen Portofolio (Investment Analysis and Portfolio Management)", *First Printing BPFE*, Yogyakarta.
- Ghozali, Imam. (2005), "Aplikasi Analisis Multivariate Dengan Program SPSS (Applications of Multivariate Analysis With SPSS Program)", *Agency Publisher Diponegoro University*.
- Gujarati, Damodar. (1997), *Ekonometrika Dasar (Basic Econometrics)* Translation by Sumarno Zain, *Erlangga Publisher*, Jakarta.
- Gujarati, Damodar. (2003), *Essential of Econometrics*, Second Edition, McGraw-Hill.Inc., London.
- Jhingan, ML. (2008), *Ekonomi Pembangunan dan Perencanaan (Economic Development and Planning)*, translated by D.Guritno, Seventh edition, *Raja Grafindo Persada*, Jakarta.
- Mangkoesoebroto, Guritno. (1998), *Ekonomi Publik (Public Economics)*. Edition 3. BPFE, Yogyakarta.
- Santoso, Singgih. (2004), *Buku Latihan SPSS Statistik Parametrik (SPSS Statistical Parametric Exercise Book)*, *Elex Media Komputindo*, Jakarta.
- Soediyono, Reksoprayitno. (2000), *Ekonomi Makro (Macroeconomics): Pengantar Analisis Pendapatan Nasional (Introductory Analysis National Income)* Second Edition, *Liberty*, Yogyakarta.
- Sukirno, Sadono. (1996), *Pengantar Teori Makro Ekonomi (Introduction to Macroeconomic Theory)*, *Raja Grafindo Persada*, Jakarta.
- Tambunan, T. (1998), *Krisis Ekonomi Dan Masa Depan Reformasi (Economic Crisis and The Future Reformation)*, *LPFE-UI*, Jakarta.
- Todaro, Michael. (2000), *Economic Development*. Seventh Edition, *Addision Wesley*, England.
- Zhao, Bing., Liu, Jinpeng. (2010), *Research on Pushing Effect of Urbanization on China Western Investment*, *International Journal of Economic Finance*, Vol.2, No.1. 182-185.
- Zouhaier, Hadhek. (2012), *Institutions, Investment and Economic Growth*, *International Journal of Economic Finance*. Vol.4, No.2. 152-162.

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