

CHAPTER IV

DISCUSSION

A. Hypothesis Test

1. F-Statistic Test

The F statistic is used to test the significant effect of the dependent variable on the overall independent variable from the results of the regression analysis obtained a significant probability value of F-statistics 0.033033 (it will mentioned at table 4.6) because the significant probability of $f\text{-statistic} < 0.05$, then H_0 is rejected and H_1 is accepted. This means that *Zakat* funds, inflation, exports and imports together affect the Gross Domestic Product (GDP). High and low GDP in Indonesia is determined by various factors, and among these factors are *Zakat* funds, inflation, exports and imports.

2. T-Statistics Test

T test is used to test the significance of the effect of independent variables partially related variables. To find out the effect of each variable on the dependent variable can be explained as follows:

a. *Zakat*

Based on the results of the regression model, on the *Zakat* variable the probability value is $0.0000 < 0.05$. Then H_0 is rejected and H_1 is accepted, meaning that the independent variable of *Zakat* has a significant effect on Gross Domestic Product (GDP).

b. Inflation

Based on the results of the regression model, the inflation variable probability value is $0.9972 > 0.05$. Then H_0 is rejected and H_1 is accepted, meaning that the independent variable inflation has no significant effect on Gross Domestic Product (GDP).

c. Export

Based on the results of the regression model, on the export variable the probability value is $0.0011 < 0.05$. Then H_0 is rejected and H_1 is accepted, meaning that the independent export variable has a significant effect on Gross Domestic Product (GDP).

d. Import

Based on the results of the regression model, the Import variable the probability value is $0.0000 < 0.05$. So H_0 is rejected and H_1 is accepted, meaning that the independent import variable has a significant effect on Gross Domestic Product (GDP).

3. Adjusted (R^2)

The determination coefficient test results can be seen at table 4.4 on the coefficient of determination R^2 of 0.539320, so it can be said that the results of tests conducted goodness of fit. The coefficient of determination is positive; this shows that 53% of GDP is influenced by *Zakat*, export and import variables. While the remaining 47% is influenced by other variables.

B. Data Processing

1. Unit Root Test

a. logGDP

Table 4.1. LogGDP Unit Root Result

Null Hypothesis: LOGGDP has a unit root			
Exogenous: Constant			
Lag Length: 9 (Automatic - based on SIC, maxlag=12)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-4.347.847	0.0007
Test critical values:	1% level	-3.498.439	
	5% level	-2.891.234	
	10% level	-2.582.678	
*MacKinnon (1996) one-sided p-values.			

From the results of Argumented Dickey-Fuller for the GDP variable on the data lever is stationary because the value of Argumented Dickey-Fuller t-statistic (-4.347847) is negative and above -3.498439.

b. LogZakat

Table 4.2. LogZakat Unit Root Result

Null Hypothesis: LOGZAKAT has a unit root			
Exogenous: Constant			
Lag Length: 0 (Automatic - based on SIC, maxlag=12)			
		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		-7.540421	0.0000
Test critical values:	1% level	-3.492523	
	5% level	-2.888669	
	10% level	-2.581313	
*MacKinnon (1996) one-sided p-values.			

From the results of Argumented Dickey-Fuller for the *Zakat* variable on the data lever is stationary because the value of Argumented Dickey-Fuller t-statistic (-7.540421) is negative and above -3.492523.

c. Inflation

Table 4.3. Inflation Unit Root Result

Null Hypothesis: INFLATION has a unit root		
Exogenous: Constant		
Lag Length: 1 (Automatic - based on SIC, maxlag=12)		
	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.405865	0.0000
Test critical values:	1% level	-3.493129
	5% level	-2.888932
	10% level	-2.581453
*MacKinnon (1996) one-sided p-values.		

From the results of Augmented Dickey-Fuller for the inflation variable on the data lever is stationary because the value of Augmented Dickey-Fuller t-statistic (-9.405865) is negative and above -3.493129.

d. LogExport

Table 4.4. LogExport Unit Root Result

Null Hypothesis: LOGEXPORT has a unit root		
Exogenous: Constant		
Lag Length: 1 (Automatic - based on SIC, maxlag=12)		
	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.556339	0.0000
Test critical values:	1% level	-3.492523
	5% level	-2.888669
	10% level	-2.581313
*MacKinnon (1996) one-sided p-values.		

From the results of Augmented Dickey-Fuller for the export variable on the data lever is stationary because the value of Augmented Dickey-Fuller t-statistic (-9.405865) is negative and above -3.493129.

e. LogImport

Table 4.5. LogImport Unit Root Result

Null Hypothesis: D(LOGIMPORT) has a unit root		
Exogenous: Constant		
Lag Length: 1 (Automatic - based on SIC, maxlag=12)		
	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-11.29258	0.0000
Test critical values:	1% level	-3.493747
	5% level	-2.889200
	10% level	-2.581596
*MacKinnon (1996) one-sided p-values.		

From the results of Argumented Dickey-Fuller for the D(import) variable on the data lever is stationary because the value of Argumented Dickey-Fuller t-statistic (-11.29258) is negative and above -3.493747.

C. Cointegration Test

a. Long Term Regression

Table 4.6. Long Term Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOG(ZAKAT)	-0.008015	0.012385	-0.647184	0.0000
INFLATION	0.000522	0.000951	0.548834	0.0927
LOG(EXPORT)	0.000455	0.000500	0.909309	0.0000
LOG(IMPORT)	-4.46E-05	0.000518	-0.086216	0.0000
C	2.227.144	0.615706	3.617.222	0.0000
R-squared	0.940879	Mean dependent var		2.622.113
Adjusted R-squared	0.938584	S.D. dependent var		0.146502
S.E. of regression	0.036307	Akaike info criterion		-3.748.440
Sum squared resid	0.135772	Schwarz criterion		-3.624.268
Log likelihood	207.4158	Hannan-Quinn criter.		-3.698.093
F-statistic	409.8008	Durbin-Watson stat		1.274.736
Prob(F-statistic)	0.000000			

1) Unit Root Test for ECT

Table 4.7. ECM Long Term Result

Null Hypothesis: ECT has a unit root		
Exogenous: Constant		
Lag Length: 1 (Automatic - based on SIC, maxlag=12)		
	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-3.179615	0.0240
Test critical values:	1% level	-3.493129
	5% level	-2.888932
	10% level	-2.581453
*MacKinnon (1996) one-sided p-values.		

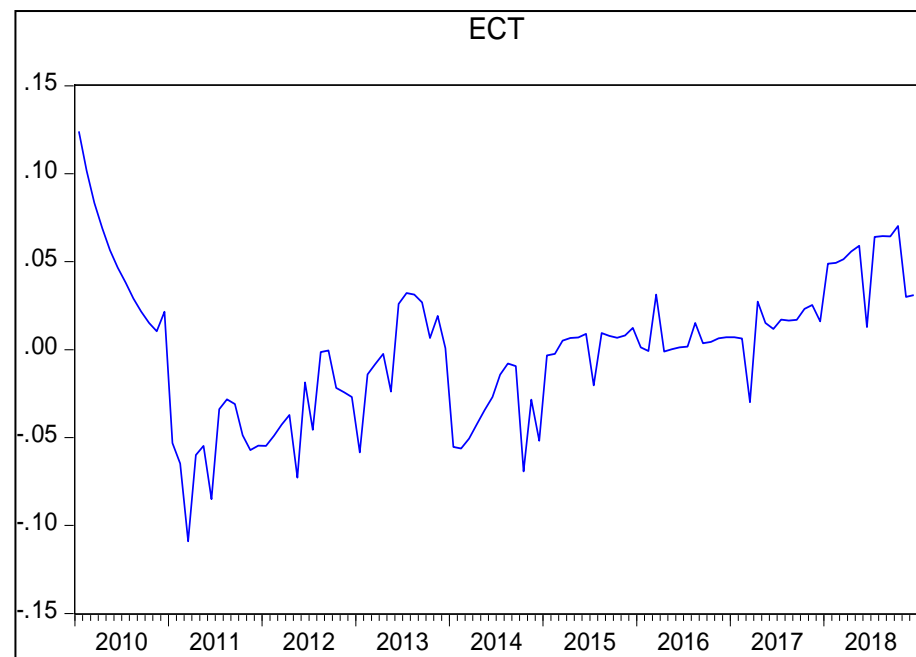


Figure4.1. ECT

b. Error Correction Model Short-Term (Equation Value)

Table 4.8. ECM Short Term Result

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGZAKAT)	0.153390	0.007541	20.34018	0.0000
D(INFLATION)	0.060054	0.006725	0.097249	0.9227
D(LOGEXPORT)	0.063984	0.019057	3.357571	0.0011
D(LOGIMPORT)	-0.032747	0.003980	-8.227830	0.0000
ECT(-1)	-0.206600	0.014958	-1.778330	0.0484
C	28.99867	2.491439	11.63933	0.0000
R-squared	0.539320	Mean dependent var		3.568.405
Adjusted R-squared	0.505816	S.D. dependent var		0.123461
S.E. of regression	0.086791	Akaike info criterion		-7.402.292
Sum squared resid	0.414294	Schwarz criterion		-7.252.413
Log likelihood	64.12943	Hannan-Quinn criter.		-7.341.533
F-statistic	1.224798	Durbin-Watson stat		1.222.867

Table 4.8 shows the standardized coefficients section zakat obtained the value of 0.153390, inflation is 0.060054, export is 0.063984 and import is -0.032747. the equation of Error Corection Model (ECM) in this study is :

$$DLogGDP_t = \beta_0 + \beta_1 DLogZAKAT_t + \beta_2 DINFLATION + \beta_3 DLogEXPORT + \beta_4 DLogIMPORT + ECT(-1)$$

Based on these equation the variables are interpreted from the Error Corection Model (ECM) equation as follows:

- 1) The coefficient value of zakat is 0.153390 which means zakat has positive impact to Gross Domestic Product (GDP). Every grow 1% zakat will up to 0.0153390.

- 2) The coefficient value of inflation is 0.060054 but inflation is not significant on Gross Domestic Product because the value of probability $0.9227 > 0.05$.
- 3) The coefficient value of Export is 0.063984 which means Export has positive impact to Gross Domestic Product (GDP). Every grow 1% Export will up to 0.063984.
- 4) The coefficient value of Import is -0.032747 which means has a negative impact to Gross Domestic Product (GDP). Every grow 1% Import will down up to -0.032747.

D. Classic Assumption Test

1. Normality Test

The normality test used in this study is to use the Jarque-Bera test by looking at probability values. If the probability value is greater than the value of the degree of error $\alpha = 5\%$ (0.05), then this study has no problem of normality or in other words the data is normally distributed. And conversely, if the probability value is smaller than the value of the degree of error $\alpha = 5\%$ (0.05), then in this study there is a problem of normality or not normally distributed. After the data is processed using the Eviews7.0 application the results is shown on the next page.

Based on Figure 4.2 the normality test illustrates that the data in this study are normally distributed. Seen from the probability value of 0.367416 is greater than 0.05, this means that this study does not have a problem of normality or normally distributed data.

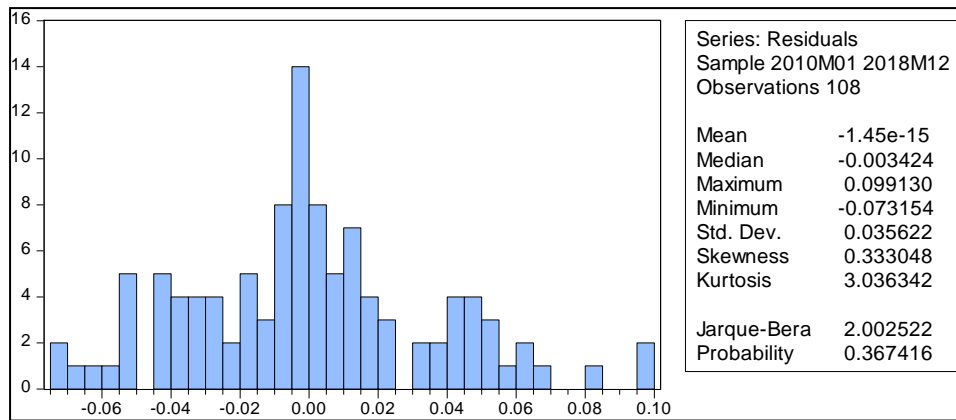


Figure 4.2. Normality Test Result

2. Heteroscedasticity Test

In test *Breusch-Pagan-Godfrey*. The linear regression model used in this study is to get the residual value. Then the residual value is absolute and regression is performed with all the independent variables that have a significant influence above the 5% confidence level of absolute residuals, so there is heteroscedasticity in this regression. The heteroscedasticity test can be seen in table 4.9 as follows:

Table 4.9. Summary of Heteroscedasticity Test

Heteroskedasticity Test: Breusch-Pagan-Godfrey			
F-statistic	0.363429	Prob. F(5,101)	0.8725
Obs*R-squared	1.891.072	Prob. Chi-Square(5)	0.8640
Scaled explained SS	6.439.882	Prob. Chi-Square(5)	0.2657

Source: Result analysis

From table 4.9 above it is known that the probability of Obs* R-squared is 0.8640 greater than $\alpha = 5\%$ (0.05), then this model means that there is no heteroscedasticity problem or the data in this study are homoscedasticity.

3. Multicollinearity Test

Multicollinearity test is performed to find out whether there is a significant correlation between two or more independent variables in the regression model. Detection of multicollinearity is done by using partial choleras test between independent variables, then it can be decided whether the data is affected by multicollinearity or not, namely by testing the correlation coefficient between independent variables. The following is a summary of the results of the multicollinearity test:

Table 4.10. Summary of Multicollinearity Test

Variance Inflation Factors Date: 08/19/19 Time: 01:40 Sample: 2010M01 2018M12 Included observations: 107			
Variable	Coefficient Variance	Uncentered VIF	Centered VIF
D(LOG(ZAKAT))	0.000147	1.452.392	1.085.061
D(INFLATION)	8.89E-07	1.021.950	1.021.938
D(LOG(EXPORT))	7.59E-06	1.067.522	1.067.513
D(LOG(IMPORT))	3.49E-06	1.032.096	1.026.074
ECT(-1)	0.000284	1.107.054	1.106.746
C	4.35E-07	1.377.190	NA

Source: result analysis

Based on the table above it is known that the value of each Centered VIF is less than 10, it can be stated that there is no multicollinearity problem in this regression model.

4. Autocorrelation Test

Autocorrelation can do with statistic *Breusch-Godfrey Serial Correlation LM Test*. If there is a variable lag, use the autocorrelation test. Following are the results of the autocorrelation test:

Table 4.11. Summary of Autocorrelation Test

Breusch-Godfrey Serial Correlation LM Test:			
F-statistic	10.19122	Prob. F(2,99)	0.2914
Obs*R-squared	18.26835	Prob. Chi-Square(2)	0.2265

Source: result analysis

Prob Chi Square value(2) which is the p value of the Breusch-Godfrey-Serial Correlation LM Test, which is equal to 0.2265 where > 0.05 so that it is accepted by H_0 or which means there is no serial autocorrelation problem.

E. Interpretation

1. Influence of *Zakat* Fund on GDP in Indonesian 2010-2018.

Based on the results obtained by *Zakat* funds it has positive and significant effect on economic growth in Indonesia in 2010-2018. Variable *Zakat* funds have a probability of 0.0000, which means below 0.05 or 5%, which means significant and coefficient *Zakat* is 0.153390 it's mean have a positive effect on economic growth in Indonesia for the period 2010-2018.

It can be seen that the distribution of *Zakat* funds will gradually eliminate poverty, increase employment and income growth in the economy, so it can increase the standard of living of the people and ultimately have a positive effect on economic growth.

2. Influence of Inflation on GDP in Indonesian 2010-2018.

Based on the results obtained, inflation shows negative relationship and is not statistically significant for Indonesia's economic growth for the period 2010-2018.

The high inflation will be responded negatively by economic growth in Indonesia. Bank Indonesia writes that high inflation will cause public income to continue to decline so that the standard of living of the people also decreases. This will affect the community's decision to make consumption, investment and production so that it will reduce economic growth.

The Indonesian economy always experiences inflation every year, although inflation that occurs always changes every year which is influenced by many factors. In 2011 and 2012 the inflation was quite restrained due to several factors, such as seasonal factors, global food commodity prices which experienced a decline and postponement of electricity tariff hikes and subsidized fuel prices as well as the influence of the implementation of monetary and macro prudential policy reforms. Furthermore, in 2013 there was an inflation of 8.38%. The high inflation has at least three factors. First, the increase in the price level of imported goods due to the weakening of the rupiah value, secondly, the increase in the wage rate of labour that is not balanced by the increase in productivity, and the third is the increase in subsidized fuel. Then in 2014 inflation was also still at a high level of 8.46% which was slightly lower than in 2013. 8.38% inflation in 2013 was the highest since the 2008 financial crisis. At that time inflation broke through the two-digit number, 11.06%. Commodities that provide large fairness to the high rate of inflation are related to efforts to reform subsid energy which includes LPG, Electricity and Fuel Prices.

Entering 2015 with the new government, inflation can be reduced. The increase in subsidized fuel prices which had been raised at the end of 2014 by the new government was lowered again had a very significant effect. In 2015 inflation fell to reach 3.35%. Although inflation in 2015 has been controlled but still cannot increase the rate of economic growth, because the decline in inflation is only one period, economic growth does not directly indicate changes, unless inflation continues to decline, there will be a change in economic growth(BPS, 2015),

3. Influence of Export on GDP in Indonesian 2010-2018.

Based on the results obtained by exports, it has a positive and significant effect on economic growth in Indonesia in 2010-2018. The export variable has a probability of 0.0011 which means it is below 0.05 or 5%, which means that it is significant and coefficient value 0.063984 exports have a positive effect on economic growth in Indonesia for the period 2010-2018. This happened because exports have a positive influence in increasing GDP and the country's productivity.

If exports experience increased, the production of goods and services will also increase because of increased exports indicating demand for goods and services abroad is greater than the demand for foreign goods in the country. Therefore, the economy will increase the amount of production of services and goods. Increasing production of goods and services will lead to an increase in economic growth.

Conversely, if exports experience decreased due to a decline in demand for goods and services abroad so that imports are greater than exports and this will result in decreased production of goods and services. The decline in the production of goods and services causes a decline in economic growth.

4. Influence of Import on GDP in Indonesian period 2010-2018.

Based on the results obtained, imports have a negative effect and significant on economic growth in Indonesia in 2010-2018. The import variable has a probability of 0.0000, which means it is under 0.05 or 5%, which means it is significant and coefficient value -0.032747 imports have a negative effect on economic growth in Indonesia for the period 2010-2018.

Because of reducing the amount of imports of goods and services received in the country will increase goods and services within the country itself. And if the amount of imports received in the country will cause competition for domestic industries that do not develop because they face competition from foreign goods and services.

If the amount of domestic imports closes the opportunity to produce imported goods themselves. And excessive consumption, especially for luxury goods, is one of the impacts that can be created from the import of goods.

The goods and services used to meet the needs of the community and as many raw materials for production are imported from other countries. If goods and services imported from abroad increase, it will not encourage

an increase in domestic economic activities in terms of production, consumption and distribution. If economic activity goes well it will increase economic growth.