Indonesian Economic Growth Rate:
Inflation and Unemployment Rate Analysis

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Abstract: The economic growth of the country is influenced by several factors, besides the import export factor, the factors that often become the spotlight are the inflation rate and the unemployment rate. This study aims to determine the extent of the relationship between economic growth in Indonesia with inflation and unemployment rates. The method used is a statistical analysis with linear regression and simple correlation approach, using a 32 year sample, originating from Central Bureau of Statistics (BPS). This study resulted in more influential level of inflation affecting Indonesia's economic growth rate for 32 years (4 decades), meaning that the increasing of inflation and unemployment resulted in the decreasing of Indonesian economic growth rate.

1 INTRODUCTION

The Indonesian economy since the economic crisis in mid-1997 made the condition of Indonesia's economy as well as employment slump. Since then, Indonesia's economic growth has also never reached 8 percent. In fact, the problem of inflation and unemployment is closely related to economic growth (Mohseni & Jouzaryan, 2016). If economic growth exists, automatic absorption of labor also exists and also the level of insulation will get better. Each one percent economic growth, absorbed workforce can reach 400 thousand people. If Indonesia's economic growth is only 3-4 percent, it will only absorb 1.6 million workers, while job seekers reach an average of 2.5 million per year. So, every year there must be some job seekers who do not get a job and cause the number of unemployed in Indonesia to increase.

Imagine, in 1997, the number of open unemployed reached 4.18 million. Further, in 1999 (6.03 million), 2000 (5.81 million), 2001 (8,005 million), 2002 (9.13 million) and 2003 (11.35 million). Meanwhile, employment and unemployment data showed, in 2001: working age (144.033 million), labor force (98.812 million), working population (90.807 mil-lion), open unemployed (8,005 million), half unemployed (6.010 million), half Voluntary unemployed (24,422 million) (Bps.go.id, 2017).

One aspect to look at the performance of the economy is how effective the use of existing resources so that employment is the concern of policymakers. So that the disorder and the decrease of employment and long-term economic growth, resulting in a negative relationship between long-term economic growth and unemployment rate (Chen, Hsu, & Lai, 2016).

Economic growth is usually followed by the creation of new jobs. As the economy grows, there is a growth in the production of goods and services. When this happens then the need for labor to produce goods and services will grow. Economic growth and unemployment have a strong relationship because the working population contributes to produce goods and services while unemployment does not contribute. In addition, misplacing the role of inflation will cause the growth of a country's economy and even endanger the country's economic growth (Baharumshah, Slesman, & Wohar, 2016). A study conducted by Bittencourt indicates that inflation is detrimental to Latin American countries experiencing hyperinflationary episodes In the 1980s (Argentina, Bolivia and Brazil) and the early 1990s (Brazil and Peru (Bittencourt, 2012).

This research is conducted to see more deeply about whether there is a relationship between the level of insulation and the level of appreciation with the level of economic growth of Indonesia during the last 32 years or 4 decades.

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2 METHODS

The population used in this study is all data related to Unemployment and economic growth recorded in BPS (Central Bureau of Statistics). The sample is defined as part or whole population by a particular method as part or whole population by a particular method as a representative part of the population. The sampling technique used is purposive sampling with the aim to get the appropriate sample with the purpose of research (Sugiyono, 2012).

The purposive sampling method is a sampling method based on certain considerations or criteria. The data criteria in this study are as follows: data that has been recorded in the Central Hall of Statistic, data that has criteria for complete report data for a certain period. Based on sample criteria, the data used from BPS is for 32 years (4 decades). In this study data analysis used by the authors is the Simple Linear Regression Test and Product Moment Pearson Correlation (Santoso, 2009).

3 RESULTS AND DISCUSSION

Below is a table showing the data Unemployment, Invasion and Economic Growth at Central Hall Statistic period 1985-2016 (4 decades) are:

Table 1: Average data on economic growth, inflation and unemployment 4 decade year 1985 to 2016.

Decades	Economic Growth	Inflation	Unemployment
1	5,91	6,91	2,63
2	3,41	16,79	4,86
3	5,19	9,43	9,46
4	5,19	9,43	9,46

Source: BPS and BI (processed)

Form the hypothesis to test the coefficients b0 and b1 (Santoso, 2009). H0: β0 = 0, H0: β0 0 DanH1: β1 = 0, H0: β1 0 Where β0 and β1 are parameters of the regression model yi = β0 + β1 χi + εi (Sunarto, 2007).

Table 2: Model summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,861[a]	,742	,724	1,92548

a. Predictors: (Constant), Unemployment Rate, Inflation Rate

b. Dependent Variable: Indonesian Economic Growth Rate

• The R2 (R square) value indicates that 74.2% of the "Inflation Rate" variance and the "Unemployment Rate" variance can be explained by changes in the "Indonesian Economic Growth".

• ANOVA table above indicates that the regression is statistically very significant with the value of F = 41,723 for the degrees of freedom k = 1 and nk-1 = 4 - 1 - 1 = 2 and P-value = 0,000 which is much smaller than α = 0.05 .

Table 3: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	309,375	2	154,688	41,723	,000[a]
	Residual	107,517	29	3,707		
	Total	416,892	31			

a. Predictors: (Constant), Unemployment Rate, Inflation Rate

b. Dependent Variable: Indonesian Economic Growth Rate

• Test F simultaneously test the hypothesis H0: β1 = β2 = β3 = ... βk = 0 to H1: not all βi, í = 1, 2, ..., k are equal to zero. But since at the simple regression there is only one β1, then we just test H0: β0 = 0 to H1: β1 0. From the ANOVA table it is clear that H0 is rejected because P-value = 0.000 is smaller than α = 0.05

Table 4: Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	7,936	,872		9,097	,000
	Inflation Rate	-,245	,027	-,858	-9,102	,000
	Unemployment Rate	-,089	,130	-,065	-,684	,499

a. Dependent Variable: Indonesian Economic Growth Rate

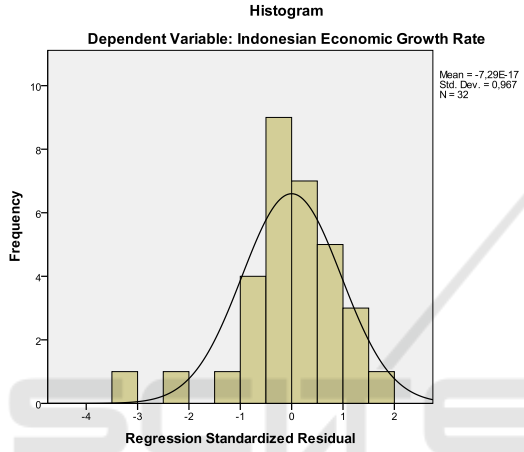

Figure 1: Histogram analisys regression.

• The equation of the regression line using the least squares method (least square method) obtained is: $\hat{Y}$ = 7,936 - 0,245 x - 0,089 z

Where $\hat{y}$ = Indonesia Economic Growth Rate, x = Inflation Rate and z = Unemployment Rate

• To test the significance of each regression coefficient used statistical test t. To test β1: H0: β1 = 0 to H1: β1 0. In the value can t = 9.097 with degrees of freedom n - 2 = 4 - 2 = 2 and P-value = 0.000. This is strong evidence of rejection H0: β1 = 0, since P-value = 0.000 is smaller than α = 0.05

Product moment correlation is used to know the degree of relationship and contribution of independent variable or independent with dependent variable or dependent. The technical analysis of the product moment correlation includes the parametric technique which uses the data and the ratio with the ratio requirement. The product moment correlation is denoted by small r with the provision that the value of r is not more than the price ($-1 \leq r \leq 1$). If the value of r = -1 means negative perfect correlation; R = 0 no correlation; And r = 1 means very strong correlation (Sunarto, 2007).

Table 5: Results of statistics calculations

		Indonesian Economic Growth Rate	Inflation Rate	Unemployment Rate
Indonesian Economic Growth Rate	Pearson Correlation	1	-,859**	-,073
	Sig. (2-tailed)		,000	,693
	N	32	32	32
Inflation Rate	Pearson Correlation	-,859**	1	,009
	Sig. (2-tailed)	,000		,959
	N	32	32	32
Unemployment Rate	Pearson Correlation	-,073	,009	1
	Sig. (2-tailed)	,693	,959	
	N	32	32	32

**. Correlation is significant at the 0.01 level (2-tailed).

The results above data shows the value of r = -0.859 means the relationship between the rate of inflation with the level of economic growth Indonesia shows a very strong relationship and Negative and negative pattern. This means that the higher the rate of inflation will result in lower economic growth, as well as the unemployment rate, but not as much as the effect caused by the inflation rate is the same as the result of research conducted by Vinaya who conducted research in 32 Asian Countries (Vinayagathasan, 2013). Furthermore, the role of government in making regulations and legislation is very helpful in order to succeed the economic growth of a country (Huang & Ho, 2016). Likewise the business community that always has the innovation and creativity can maximize its potential to support the development and economic growth in the State of Indonesia (Riswanto, 2016).

4 CONCLUSIONS

This research concludes some things that is that both factors are examined both the level of inflation and unemployment has a solvent to the economic growth rate Indonesia country. The second, it can be concluded that the level of insulation has a significant influence on the level of economic growth. Third, the need for cooperation of various parties, both communities, governments and other countries to increase economic growth in Indonesia.

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