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Employment Opportunities in Indonesia: The Effect of Investment and Inflation

Abdul Rahman Razak[1], Sabir Sabir[2], Tia Aulia[3], Annida Maulidya Ridwan[4]

[1] *Faculty of Economics and Business, Hasanuddin University, Indonesia, arnan2009@yahoo.co.id*

[2] *Faculty of Economisc and Business, Hasanuddin University, Indonesia, sabirfeuh@gmail.com*

[3] *Faculty of Economics and Business, Hasanuddin University, Indonesia, tiaauliaa9@gmail.com*

[4] *Faculty of Economics and Business, Hasanuddin University, Indonesia, maulidyaannida627@gmail.com*

Abstract: This study attempts to examine the impact of investment and inflation on job opportunities in South Sulawesi province (the case of a regency and 4 cities). The path analysis with the secondary data was used as the analysis method. In this study, the dependent variable is employment opportunities. Independent variables are investment and inflation, and the intervening variable or mediating variable is the economic growth. The research findings reveal that the investment has a significant impact on economic growth and employment opportunities, while the inflation has no impact on economic growth and employment opportunities. Thus the economic growth has no impact on employment opportunities.

Keywords: employment, economic growth, investment, inflation.

1. Introduction

Economic development is a multifaceted process that includes increasing people's income, alleviating poverty, changing social structures, changing people's attitudes, and changing institutions at both the local and national levels. South Sulawesi, as part of the Republic of Indonesia, is developed in the same way as other regions in Indonesia. South Sulawesi Province does not operate on a shoestring budget when it comes to development. In providing capital to accelerate development, the local government opens itself up to the flow of private capital from both domestic and foreign private parties. The private sector's investment, both from outside and within the country, is expected to stimulate

the economic growth and creates a multiplier effect, in which these activities stimulate other economic activities, which in turn expand employment opportunities. If this occurs, the province of South Sulawesi has the potential to become a gateway to other regions, particularly Eastern Indonesia. South Sulawesi is thus designated as a strategic region. With this strategic position, the economy of South Sulawesi province should be improved, allowing for a greater economic development. Economic growth will rise in tandem with the development of the economic sector.

South Sulawesi Province, the region with the seventh highest population growth in Indonesia, has a fluctuating unemployment rate, which means that certain variables cause employment opportunities to be unavailable as expected, despite the fact that economic growth is constant year after year. As a result, researchers are interested in conducting research on employment opportunities provided by the economic growth through investment and inflation. Several researchers have also conducted empirical studies on job opportunities. A study conducted by Bayu Dwi Dharma and Sjamsu Djohan (2015) aims to examine the impact of investment and inflation on job opportunities created by the economic growth in Samarinda. Path analysis was used as the analysis method. Employment opportunities were a dependent variable, as were investment and inflation, and the economic growth serving as an intervening variable. The findings revealed that the investment variable had a positive effect on economic growth and job opportunities in Samarinda City, whereas the inflation variable had a negative effect on economic growth and job opportunities in Samarinda City. The economic development has a positive impact on job opportunities in Samarinda.

Siestri Pristina Kairupan (2013) studies the impact of the gross regional domestic

product (GRDP), inflation, and regional expenditure on employment opportunities in South Sulawesi from 2000 to 2012. The Ordinary Least Squares (OLS) method was used in the research. Employment opportunities are the dependent variable, and the independent variables are gross regional domestic product, regional spending, and inflation. The findings revealed that gross regional domestic product and the inflation rate had a negative impact on employment opportunities in North Sulawesi Province, whereas the regional expenditure had a positive and significant impact.

Syamsu Nujum and Zainuddin Rahman (2019) has the purpose of research to examine the impact of investment and inflation on the economic growth in Makassar City. The multiple regression analysis was used as the analysis method. The economic growth is the dependent variable, while investment and inflation are the independent variables. The findings revealed that the investment had an effect on the economic growth, but it was insignificant, and the inflation had an effect on the economic growth, but it was insignificant.

The following is the study's hypotheses:

1. It is suspected that the investment has a positive impact on employment opportunities in South Sulawesi province, both directly and indirectly.
2. It is suspected that the inflation has a negative impact on employment opportunities in South Sulawesi province, both directly and indirectly.

2. Method

The purpose of this study is to examine the impact of investment and inflation on employment opportunities through economic growth in five districts or cities in

South Sulawesi province (Makassar, Pare-pare, Watampone, Palopo, and Bulukumba) from 2010 to 2019.

A secondary data is used in this study in the form of a panel data regression. The secondary data in this study includes investment, inflation, economic growth, and job opportunities in the province of South Sulawesi. The panel data is a combination of cross-section and time series data, which was used in this study for a 10-year period in the case of five districts or cities (Makassar, Pare-pare, Watampone, Palopo, and Bulukumba) taken directly from the Central Statistics Agency of South Sulawesi province.

The path analysis data analysis method was used in this study to examine the causal relationship between one variable and another. The path analysis technique is used to examine the impact of investment and inflation on job opportunities in South Sulawesi province as a result of economic growth. The F-test, T-test, and determinant test are statistical tests used in regression analysis. The F-test is a test used to determine whether the influence of all independent variables on the dependent variable is significant or insignificant, as well as whether the existing regression model is significant or insignificant. If the sig value is 0.05, it means that the independent variable (X) affects the dependent variable (Y) at the same time. The T-test is used to determine whether or not the effect of each independent variable on the dependent variable is significant. The test is performed with a 5% error degree in the sense ($\alpha = 0.05$). The t-test is used to determine the effect of each independent variable on the dependent variable, either entirely or partially. If the significant value is lower 0.05, it means that the independent variable (X) influences the dependent variable (Y) partially. The determinant test, also known as the coefficient of determination (R^2), measures a model's ability to explain variation in the dependent variable. The R^2 value range is between zero to one. A low R^2 value, close to zero, indicates that the ability of

a single variable to explain the dependent variable is severely limited (Ghozali, 2005).

The regression calculation results will be tested for classical assumptions in order to obtain results in the best, linear, and unbiased estimation (BLUE) category. Normality, multicollinearity, heteroscedasticity, and autocorrelation are all tested for in the classical assumption test (Gujarati, 2009).

A normality test determines whether the confounding or residual variables in the dependent variable regression model have a normal distribution. Normality occurs when the data spreads around the diagonal and follows the direction of the diagonal line, whereas normality does not occur when the data spreads far from the diagonal and or does not follow the direction of the diagonal line.

In multiple regression, the multicollinearity test is a linear relationship between independent variables. Multicollinearity testing is performed by looking at; if the Variance Inflation Factor value >10 and Tolerance value <10 then the research can be declared multicollinearity, otherwise the research is free of multicollinearity symptoms.

The heteroscedasticity test determines whether there is a variance inequality between the residuals of one observation and the residuals of another in the regression model. The scatterplot can be used to test a heteroscedasticity if there is a certain pattern, such as points that form a certain regular pattern (wavy, widening, then narrowing), then the heteroscedasticity occurs. If the scatterplot has no clear pattern and the points are spread above and below the number 0 on the Y axis, there is no heteroscedasticity.

The autocorrelation test demonstrates the relationship between variables at different times or individual observations. If this occurs, the equation is unsuitable for use as a prediction. The following is an example of autocorrelation testing

using the Durbin Watson (DW) table criteria with a significance level of 5%: A DW value less than -2 indicates positive autocorrelation, a DW value between -2 and +2 indicates no autocorrelation, and a DW value greater than +2 indicates negative autocorrelation.

The economic model in this study is as follows:

$Y_1 = f(X_1, X_2)$ .....(1)

$Y_2 = f(X_1, X_2, Y_1)$ .....(2)

Equations (1) and (2) are then rewritten as follows:

$$Y_2 = \alpha_o + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 Y_1 + \mu_1$$

$$Y_1 = \beta_o + \beta_1 \alpha_1 + \beta_2 \alpha_2 + \mu_2$$

Then substitute the Y_1 equation into the Y_2 equation and *reduce foam* will be obtained as follows:

$$Y_2 = \alpha_o + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3(\beta_o + \beta_1 \alpha_1 + \beta_2 \alpha_2 + \mu_2) + \mu_1$$

$$Y_2 = \alpha_o + \alpha_1 X_1 + \alpha_2 X_2 + \alpha_3 \beta_o + \alpha_3 \beta_1 X_1 + \alpha_3 \beta_2 X_2 + \alpha_3 \mu_2 + \mu_1$$

$$Y_2 = (\alpha_o + \alpha_3 \beta_o) + (\alpha_1 X_1 + \alpha_3 \beta_1 X_1) + (\alpha_2 X_2 + \alpha_3 \beta_2 X_2) + (\alpha_3 \mu_2 + \mu_1)$$

$$= \delta_o + \delta_1 X_1 + \delta_2 X_2 + \mu$$

Description:

Y_1 = Economic growth

Y_2 = Employment opportunity

X_1 = Investment

X_2 = Inflation

α_o, β_o = Constant

α_1, α_2, β_1, β_2, β_3 = Regression coefficients

μ_1, μ_2 = Error term

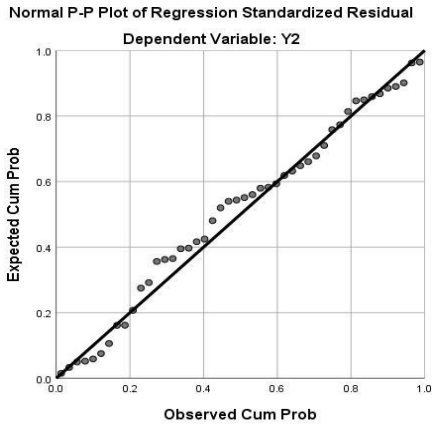
Then variables are observed in the period of 2010-2019 in 5 regions in South

Sulawesi Province. The variables observed are as follows. Y2 or employment opportunity is the ratio between the number of people who work and the number of people who are in the labor force; the data used is the level of employment opportunities measured in a percentage. Economic growth (Y1) is the increase in the production of goods and services in an economic region in a given year compared to the previous year's value calculated using GDP at constant prices; the data used is the rate of economic growth measured in a percentage. Investment (X1) is gross fixed capital formation made by the private sector in which there are households and carried out by the government; the data used is gross fixed capital formation (GFCF) measured in a percentage. Inflation (X2) is the rate of increase or decrease in the price of goods and services in general and continuously over a given period; the data used is the inflation rate in a percentage.

3. Discussion

The normality test in Figure 1 shows that the regression model in this study is normally distributed because it follows the diagonal line. As a result, we can conclude that this study is widely disseminated.

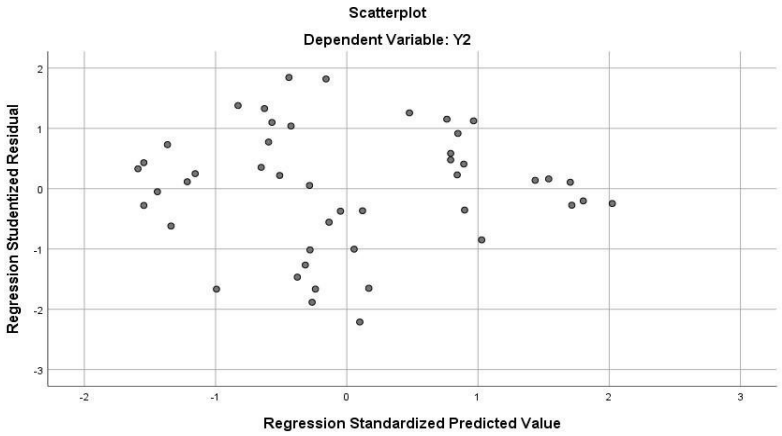
Figure 1 Normality Test Results



Source: The result of tests using SPSS

Figure 2 scatterplot graph shows that the data points do not form a specific pattern and spread above and below the number 0 on the Y axis as a result of the Heteroscedasticity test results. As a result, it is possible to conclude that this study is free of heteroscedasticity.

Figure 2 Heteroscedasticity Test Results



Source: The result of tests using SPSS

The multicollinearity test results in this study are based on Table 1, where it can be seen that the investment, inflation, and economic growth variables have a Tolerance value > 0.100 and a VIF value < 10.00. As a result, it is possible to conclude that this study is free of multicollinearity symptoms.

Table 1 Multicollinearity Test Results

Model		Collinearity Statistics Tolerance	VIF
1	(Constant)		
	X1	.886	1.129
	X2	.963	1.038
	Y1	.858	1.166

Source: The result of tests using SPSS

Based on the autocorrelation results in Table 2, where the Durbin Watson value is 1.490 and the value is between -2 and +2, it can be concluded that the equation is free of autocorrelation disorders because the DW value is between -2 and +2.

Table 2 Autocorrelation Test Results

Model Summary [b]

Model	Durbin-Watson
1	1.490

a. Predictors: (Constant), Y1, X2, X1

b. Dependent Variable: Y2

Source: The result of tests using SPSS

The results of path analysis estimation or calculation on the effect of investment and inflation on employment opportunities in South Sulawesi province.

Table 3 The Effect of Investment and Inflation on Employment Opportunities throughEconomic Growth in South Sulawesi Province

Influence between Variables	Direct Effect	Sig	Indirect Effect	Total Influence
X1→YI	0,054	0,026*	-	0,054
X2→Y1	0,090	0,242	-	0,090
X1→Y2	-0,360	0,000*	0,012*	-0,348
X2→Y2	-0,033*	0,816	0,021*	-0,012*
YI→Y2	0,230	0,417	-	0,230

Source: The result of tests using SPSS

Investment has a significant and positive effect on the economic growth, according to the findings in Table 3. This means that as the investment growth in South Sulawesi Province increases, the economic growth in South Sulawesi Province will increase, and vice versa. According to the distribution of GRDP, the largest expenditure allocation in South Sulawesi province is dominated by the household consumption expenditure, and the growth rate of investment in 5 regions, namely Makassar, Pare-pare, Watampone, Palopo, and Bulukumba, which represent South Sulawesi province, has an average growth rate of 30-40%. All expenditures on goods and services by residents of those regions, both within and outside the domestic area, are included in the consumption expenditure. Over the last ten years, gross fixed capital formation has consistently been the second after the government spending allocations, emphasizing the importance of investment in economic growth. In South Sulawesi, the investment has a positive and significant impact on the economic growth. Investment is critical to the long-term sustainability of the economic growth process. There are production activities that can create jobs and income for the community with investment from both the government and the private sector (Tambunan, 2001).

Inflation has no discernible impact on the economic growth. In the period 2010-2019, the inflation rate in the five regions used to depict South Sulawesi province was quite variable, particularly in Bulukumba district, which was included in the calculation of the inflation rate in 2014 to ensure that the inflation rate did not affect economic growth in South Sulawesi province. High inflation has no effect on the economic growth because it reduces the profitability of productive activities. This demonstrates that inflation is not a determining variable in driving the economic growth, but rather a complement to other variables not considered

in this study.

The investment variable has a significant impact on employment opportunities. The South Sulawesi region's economy is dominated by the household consumption expenditure, followed by the gross fixed capital formation as the second largest, which describes the physical investment realized in the form of various types of capital goods and other capital goods. Capital goods addition includes the procurement, manufacture, purchase, and lease purchase of new capital goods, as well as the growth of cultivated biological resource assets and the investment growth in the 5 regions used to depict South Sulawesi province, with an average growth rate of 30-40%. This will almost certainly have an impact on employment opportunities because the government spending on capital formation encourages the labor growth or increases employment opportunities.

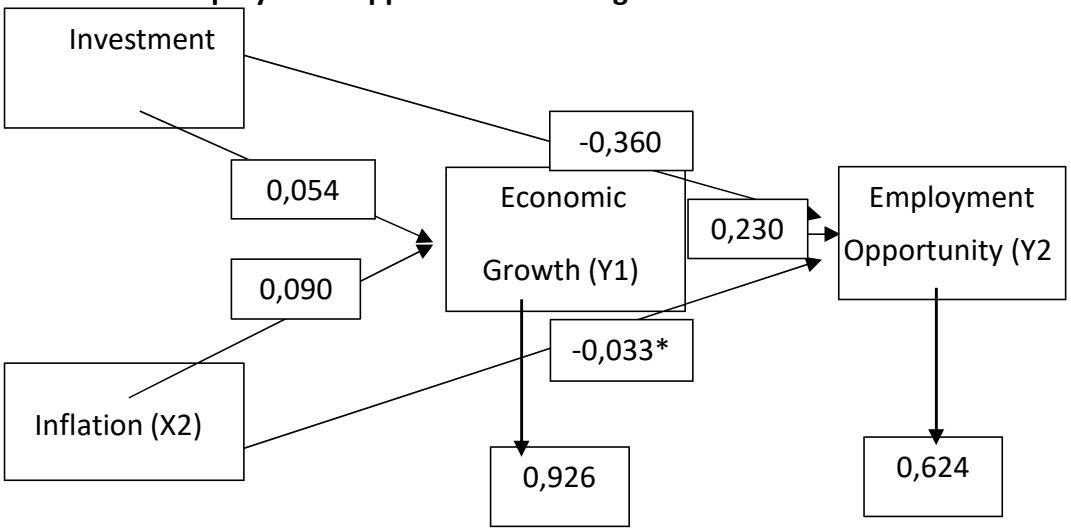
The effect of inflation on employment opportunities is neither significant nor negative. This means that any increase in inflation in South Sulawesi province reduces employment opportunities in South Sulawesi province, while any decrease in the inflation increases employment opportunities in South Sulawesi province. The state of the inflation rate in the regions used to depict South Sulawesi province for the 2010-2019 period fluctuates quite a bit; the impact of this inflation rate is that production capacity decreases, resulting in a lack of employment or a decrease in employment opportunities.

The economic growth variable has no significant and positive effect on employment opportunities. This means that both high and low economic growths in South Sulawesi province will have a marginally positive effect on employment opportunities in the province. The economic growth in the regions used to depict South Sulawesi province fluctuated from 2010 to 2019. If the economic growth increases, it will reduce the unemployment or indirectly result in a labor absorption, implying that employment opportunities have increased, but with a

fluctuating level of economic growth, the economic growth in South Sulawesi province for the 2010-2019 period has no effect on employment opportunities. The direct impact of investment on employment opportunities is -0.360, while the indirect impact of investment on employment opportunities via the economic growth is 0.012. The total effect is then -0.360 + 0.012 = -0.348, which is a direct effect plus an indirect effect. According to the calculation, the direct effect is greater than the indirect effect (-0.360 > 0.012). The Sobel test of investment variables on job opportunities via the economic growth is 0.77161494 < 1.96, indicating that economic growth variable cannot mediate the investment in job opportunities.

The direct effect of inflation on job opportunities is -0.033, while the indirect effect of inflation on job opportunities via the economic growth is 0.021. The total effect is the sum of the direct and indirect effects, which is -0.033 + 0.021 = -0.012. Based on the results of these calculations, the direct effect is greater than the indirect effect, -0.033 > 0.021. The Sobel test of the inflation variable on employment opportunities via the economic growth yields a result of 0.67494763 < 1.96, indicating that economic growth variable cannot mediate the inflation to employment opportunities.

Figure 3 A Structural Model of the Effect of Investment and Inflation on Employment Opportunities through the Economic Growth



Source: The result of tests using SPSS

Based on the structural model above, the regression equation can be rewritten as follows:

Model 1: 5.103 + 0.054X1 + 0.090X2 + 0.926

The following is how the results of the aforementioned regression equation can be understood:

The constant value of 5.103 indicates that if there is no investment (X1) and no inflation (X2), the economic growth (Y1) will fall by 5.103. The value of the 1st coefficient 1 is 0.054. It means that for every 1% increase in the investment (X1), the economic growth (Y1) will increase by 0.054, assuming all other variables remain constant. The value of the 2nd coefficient is 0.090. It means that every time the inflation (X2) rises by 1%, economic growth (Y1) will rise by 0.090, assuming the investment variable (X1) remains constant.

Model 2: 104.717 - 0.360X1 - 0.095X2 + 0.230Y1 + 0.522

The following is how the results of the aforementioned regression equation can be understood:

If there is no investment (X1), inflation (X2), or economic growth (Y1), the coefficient value of β0 is 104.717, implying that employment opportunities will decrease by 104.717. β1 has a coefficient value of -0.360. It can be interpreted as follows: for every 1% increase in the investment (X1), employment opportunities (Y2) will decrease by -0.360, assuming all other variables remain constant. The value of the coefficient β2 is -0.033. It means that for every one percent increase in the inflation (X2), employment opportunities (Y2) will decrease by -0.033, assuming all other variables remain constant. B3 has a coefficient value of 0.230. It means that for every one percent increase in the economic growth (Y1), employment opportunities (Y2) will fall by 0.230, assuming all other variables remain constant.

4. Conclusion

Based on the study's findings, it is possible to conclude that the investment has a significant impact on the economic growth in the province of South Sulawesi. This occurred because the gross fixed capital formation has consistently ranked second in the government expenditure allocation spending for the past ten years, highlighting the importance of the investment in economic growth. This condition is true in the province of South Sulawesi, so the investment has a positive and significant impact on the economic growth. The investment has a significant impact on job opportunities in the province of South Sulawesi. The South Sulawesi region's economy is dominated by the household consumption expenditure, followed by the gross fixed capital formation as the second largest, which describes the physical investment realized in the form of various types of capital

goods and other capital goods. Because the large allocation of government spending on the capital formation encourages the labor growth or increases employment opportunities, this certainly has an impact on employment opportunities. South Sulawesi province's economic growth is unaffected by the inflation. In South Sulawesi province, the inflation was quite volatile between 2010 and 2019.

The inflation has no effect on the economic growth because it reduces the profitability of productive activities. This demonstrates that the inflation is not a determining variable in promoting economic growth, but rather a complement to other variables which are not considered in this study. South Sulawesi province's employment opportunities are unaffected by the inflation. The state of inflation in South Sulawesi province until 2019 varies significantly; the impact of this inflation rate is that the production capacity decreases, resulting in a lack of employment or reduced employment opportunities. South Sulawesi province's employment opportunities are unaffected by the economic growth. For the period 2010-2019, economic growth in South Sulawesi province fluctuated, indicating that if economic growth decreases, it will increase unemployment or indirectly the lack of employment, implying that employment opportunities will decrease.

The following recommendations can be drawn from the preceding conclusions:

1) Because the investment is an important factor in the economic development, the provincial government of South Sulawesi should focus on developing existing businesses and encouraging an investment in more labor-intensive sectors to absorb more labors so that employment opportunities can continue to grow;

2) The inflation rate can be used as a variable to measure the level of employment opportunities. To encourage economic growth in South

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Sulawesi province, the government or entrepreneurs should engage in investment activities that can absorb labors. As a result, the inflation can has an impact on the economic growth and increase job opportunities.

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