The Effect of Investment and Human Development Index on Economic Growth and Poverty Level in Balikpapan City

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Abstract. This study aims to determine the relationship and influence of independent variables, namely investment and human development index, intervening variables, namely economic growth with dependent variables, namely the poverty rate in Balikpapan city in 2010-2023. The tool used in this study is path analysis. The results of this study indicate that investment and HDI are positive and do not have a significant effect on economic growth. While on the poverty rate, investment and HDI variables directly have a significant but positive effect and economic growth variables are negative but do not provide a mediating effect on the relationship between investment and poverty rates and between HDI and poverty rates in Balikpapan city.

Keywords: Investment, human development index, economic growth, poverty level

1. INTRODUCTION

Poverty is a condition where there is an inability of people to meet their basic needs. Meanwhile, according to the Central Statistics Agency (BPS), poverty is a condition of people who are unable to meet the minimum standards of basic or basic needs which include food, clothing, shelter and other non-food needs. The meaning of this definition is to compare the level of community expenditure with the poverty line or the amount of rupiah needed by the community for people's monthly expenditure needs. Poverty is caused by various factors and poverty is rarely caused by only one factor.

Poverty in Indonesia is still a problem that has not been fully resolved, in March 2023 the national poverty rate was still 9.36% as recorded by the Central Statistics Agency. Balikpapan is one of the regencies/cities in the East Kalimantan Province and has the lowest poverty rate of 2.31% in 2023, the third lowest after Sawah Lunto City and Badung Regency.

The poverty rate in Balikpapan City in 2023 decreased by 0.14 points from 2022 (2.45). This illustrates that the government has succeeded in reducing poverty rates. Various activity programs have been carried out to overcome poverty in Balikpapan City, one of which is by increasing economic growth rates with the hope of increasing economic growth accompanied by income equality.

Economic growth is one indicator used to assess the level of success of a region's development, namely by looking at economic growth rates. According to Mirza (2012), the view of development amidst current developments is by measuring human development and seeing the degree of quality of human life in each region. In addition, Stiglitz and Meier

(Kuncoro: 2010) argue that in the 2nd generation, development theories emphasize more on the amount of human resource capital by producing a development workforce with a better level of productivity through education, increased skills, better health and nutrition.

Since the issuance of Law No. 32 of 2004 which was subsequently updated by Law No. 23 of 2014 concerning Regional Government with a series of regulations related to the implementation of regional government, namely by being faced with various problems to achieve performance targets carried out in the form of development programs and this has become a phenomenon at all levels of regions in Indonesia. This also occurs in the city of Balikpapan, the determination of performance targets to be achieved can be interpreted as achievement targets in running the government in Indonesia. Performance is a form of work achievement that is expected to be achieved by the regional government through the planning and development process.

The economic growth of Balikpapan City in 2023 of 6.49 percent is quite high compared to 2022 which was only 4.94 percent. The economic growth of Balikpapan City in 2023 is ranked 4th after Kutim Regency, Samarinda City and PPU Regency which are in first place. In the same year, the poverty rate of Balikpapan City also decreased by 0.14% from 2022, which was 2.31%.

Economic growth and poverty rates can also be influenced by investment both domestically and abroad. Balikpapan City with the relocation of the new Indonesian Capital City will become one of the supporting cities for the existence of the National Capital City. By becoming a supporting area or city, Balikpapan City is expected to be able to attract investors to be able to optimally develop the potential of Balikpapan City.

Investment activities will provide opportunities for the community to sustainably improve the economy and also employment, will increase national income and of course increase the level of community prosperity. There are 3 (three) main benefits of investment, namely: (1). Investment is one element in total expenditure, so that increasing investment can have an impact on increasing total/aggregate demand, then on national income and also employment opportunities, (2). the addition of capital goods from investment activities can affect the increase in production volume, and (3). investment will be accompanied by technological developments. In addition, investment is also used as a way to reduce unemployment and poverty, because with investment, new jobs can be created for the community so that there is an increase in income which can ultimately reduce poverty rates.

Increasing human quality is also related to the amount of funds that have been paid during the implementation of development in order to increase human ability to get the

opportunity to receive more income in the future. High income levels and achieving higher levels of expenditure can be rewards in the future.

Human capital development will have an impact on human resource development. In addition, improvements in human capital are inseparable from improvements in economic performance. In other words, there is a close relationship between the economy and its influence on human development, and vice versa, improvements in human quality in the long term will have an impact on the increasing economy (Munawwaroh, 2013).

The measuring tool often used to assess the quality of human life is the human development index. In 1990 the United Nations Development Program (UNDP) introduced the "Human Development Index (HDI)" or Human Development Index (HDI). HDI can provide an overview of the results of the implementation of human development in three very basic components of capability indicators, the first is health, the second is the quality of education and the third is access to economic resources in the form of income equality and people's purchasing power. In the last five years, human development in Balikpapan City has continued to increase from 2019 to 2023 with an average annual increase of 1.55 percent. The HDI of Balikpapan City in 2019 was 80.11 percent and continues to increase every year and reaches 81.66 percent in 2023. However, in 2020 it decreased by 0.10 percent, to 80.01 percent. However, this does not change the status of Balikpapan city's human development level, which is Very High, along with 36 other districts/cities throughout Indonesia.

2. LITERATURE REVIEW

Poverty Theory

Poverty is still a problem that is generally faced by all countries, especially in developing countries such as Indonesia. The definition of poverty in a broad sense is the lack of ability of individuals, families, communities or even countries that causes the inability to meet basic life needs, the threat of injustice in law enforcement and the loss of generations and the bleak future of the nation and state.

Amartya K.Sen's Theory

Amartya Sen said that poverty occurs because of capability deprivation or the deprivation of a person's freedom to achieve something in life. In this case, the limitations of society are substantially directly related to economic poverty. Poverty has made it impossible for people to avoid hunger, malnutrition, difficulty in getting medicine for the sick, and unable to obtain clean water and good sanitation facilities. This shows that the failure to empower the

poor is caused by the behavior of leaders or governments who do not practice democracy substantively.

Poverty Circle Theory

There are 3 (three) causes of poverty identified by Sharp centered on the Vicious Circle of Poverty theory or the vicious circle of poverty. The circle of poverty is a circle or a series that influence each other, causing a condition where a country will remain poor and will always have difficulty in achieving a better level of development. The existence of backwardness, market imperfections, and lack of capital results in low productivity. Low productivity causes the low income they receive. Low income or earnings will affect the amount of savings and investment, both human and capital. Low investment results in backwardness and so on. This logic of thinking was put forward by Ragnar Nurkse (1953), who said that a poor country is poor because it is poor ("a poor country is a poor because it is poor").

Economic Growth

Economic growth according to Rostow is a process that can provide changes in people's lives, between political changes, social structures and values and the structure of economic activities. Meanwhile, according to Prof. Simon Kuznets, economic growth is defined as the ability of a country in the long term to provide various types of economic goods for its population, where this ability is influenced by technological advances, institutional and ideological adjustments. In addition, according to Jhingan (2004) in his book Modern Economic Growth in 1966, defining economic growth as a continuous increase in per capita product, which is followed by an increase in population and also structural changes.

Investment

According to Mulyadi, R.A. Supriyono (2001:284) investment is a network of funding sources with large amounts in the long term to generate profits in the future. Investment is also related to knowledge about things regarding changes in the external environment that will affect the level of success of the investment. In addition, according to Halim (2003:2) investment can also be interpreted as placing a certain amount of money at this time with the hope of obtaining profits in the future.

Human Development Index (HDI)

The first person to use the term Human Capital was Gary S. Becker. Furthermore, Ace Suryadi (1994) conducted an in-depth study of the function of formal education to support economic growth, revealing that the higher the level of formal education obtained, the higher the level of labor productivity. This is in line with the theory of human capital which states that education has an effect on economic growth because education has an effect on increasing community productivity. This theory assumes that population growth is influenced by individual productivity.

3. METHOD

The analytical tools used are multiple linear regression test analysis and path analysis. Multiple linear regression analysis is used to determine the effect of three or more variables, consisting of one dependent variable and two or more independent variables. Path analysis is an analytical method used in research to test the effect of independent variables on dependent variables, including indirect effects through mediating variables. The analysis application used in this study is using the SPSS v25 application for partial relationship analysis and the Sobel Test using an online calculator to test the effect of mediation. The regression analysis formula or equation used in this study is as follows:

$$Y1 = \alpha0 + \alpha1X1 + \alpha2X2$$
$$Y2 = \beta0 + \beta1X1 + \beta2X2 + \beta3Y1$$
$$Y2 = \beta0 + \beta1X1 + \beta2X2 + \beta3(\alpha0 + \alpha1X1 + \alpha2X2)$$
$$Y2 = \beta0 + \beta1X1 + \beta2X2 + \beta3\alpha0 + \beta3\alpha1X1 + \beta3\alpha2X2$$

4. RESULTS AND DISCUSSION

The Coefficients table is used to see the significance value as a basis for decision making. Generally, the basis for testing regression results is carried out with a confidence level of 95% or with a significance value of 5% ($\alpha = 0.05$). The criteria for the t-statistic test (Ghozali, 2016):

Table 1

Coefficients[a]

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.	Collinearity Statistics Tolerance	VIF
1	(Constant)	-76.172	167.082		-.456	.657		
	Investasi	-1.778	5.283	-.297	-.337	.743	.114	8.765
	IPM	29.480	67.713	.385	.435	.672	.114	8.765

a. Dependent Variable: PE

1) Investment

By using model 1 from the table, the investment p-value is 0.743 which is greater than the alpha significance level of 0.05 and the investment t-value is -0.337 which is smaller than the t0.25;18 value which is 2.101 so it can be concluded that the amount of investment does not have a significant effect on economic growth. The amount of investment regression coefficient is also -0.297 which means that if investment grows by one unit, it will reduce the amount of economic growth by 0.297 units.

2) HDI

Based on the table, using model 1, the HDI p-value is 0.672 which is greater than the alpha significance level of 0.05 and the HDI t-value is 0.435 which is smaller than the t0.25;18 value which is 2.101 so the conclusion is that the amount of HDI does not significantly affect economic growth. It was also found that the HDI regression coefficient was 0.385, which means that if the HDI increases by one unit, it will increase the size of economic growth by 0.385 units.

Table 2

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	112.261	22.176		5.062	<,001		
	Investasi	1.611	.698	1.058	2.308	.044	.113	8.855
	IPM	-35.172	8.980	-1.801	-3.917	.003	.112	8.916
	PE	.027	.040	.107	.690	.506	.979	1.022

a. Dependent Variable: TK

1) Investment

Based on the table, using model 2, the investment p-value is 0.044 which is smaller than the alpha significance level of 0.05 and the investment t-value is 2.308 which is greater than the t0.25;18 value of 2.101 so it can be concluded that the amount of investment has a significant effect on the poverty rate. The investment regression coefficient is also 1.058 which means that if investment increases by one unit, it will reduce the poverty rate by 1.058 units.

2) HDI

Based on the table, using model 2, the HDI p-value is 0.003 which is smaller than the alpha significance level of 0.05 and the HDI t-value is -3.917 which is smaller than the t0.25;18 value of 2.101 so it can be concluded that the amount of HDI does not have a significant effect

on the poverty rate. It is also obtained that the HDI regression coefficient is -1.801, which means that if the HDI increases by one unit, it will increase the poverty rate by 1.801 units.

3) Economic growth

Based on the table, using model 2, the p-value of economic growth is 0.506, which is greater than the alpha significance level of 0.05, and the t-value of economic growth is 0.690, which is smaller than the t0.25;18 value, which is 2.101, so it can be concluded that the magnitude of economic growth does not have a significant effect on the poverty rate. It is also obtained that the magnitude of the economic growth regression coefficient is 0.107, which means that if economic growth increases by one unit, it will increase the poverty rate by 0.107 units.

Path Analysis

Path analysis as in Research Connections is one of the specific uses of multiple regression that aims to distinguish and assess the influence of a series of variables on an outcome.

Path analysis is a form of analysis that looks at causes explicitly. The form of the relationship between variables is shown in a path diagram using arrows to illustrate the direction of the causal relationship between variables. Multiple regression is used to estimate the strength and direction of the relationship.

The test results show that the path in model 1 does not have a significant influence. Meanwhile, in model 2 there is a path with two significant variables. In accordance with the conceptual framework of this research, two linear functions can be produced, namely: models 1 and 2. The two functions produced are simultaneously combined into a path model. The independent variable is investment and the HDI is a variable that affects the dependent variable, namely economic growth and poverty levels. The influence between the independent and dependent variables is explained as follows:

a. Function 1, exogenous variables = X1, X2, and endogenous variables = Y1

   $$Y_1 = \alpha_1 X_1 + \alpha_2 X_2$$
   $$Y_1 = -0,253X_1 + 0,174X_2$$
   $$Y_1 = -0,253X_1 + 0,174X_2$$

   1. The coefficient of investment increase (X1) is -0.297. This means that if other exogenous variables remain constant and X1 increases by 1 point, then economic growth (Y1) will decrease by 29.7%. A negative coefficient indicates that there is an inverse relationship between investment and economic growth.

   2. The coefficient of the HDI variable (X2) is 0.385, which means that if other

exogenous variables remain constant and X1 increases by 1 point, then economic growth (Y1) will increase by 38.5%, or vice versa. A positive coefficient indicates a unidirectional relationship between the HDI variable and economic growth.

b.   Function 2, exogenous variables = X1, X2, Y1 and endogenous variables = Y2

$$Y_2 = \beta_1 X_1 + \beta_2 X_2 + \beta_3 Y_1$$
$$Y_2 = -0{,}378 X_1 + (-0{,}628) X_2 + 0{,}006 Y_1$$
$$Y_2 = -0{,}378 X_1 - 0{,}628 X_2 + 0{,}006 Y_1$$

1. The coefficient of investment (X1) is 1.058. This means that if other exogenous variables remain constant and X1 increases by 1 point, then the poverty rate (Y2) will decrease by 37.8%. A negative coefficient indicates that there is an inverse relationship between investment and poverty, the more the value of X1 increases, the more Y2 will decrease.

2. The coefficient of HDI (X2) is -0.628. This means that if other exogenous variables remain constant and X2 increases by 1 point, then the poverty rate (Y2) will decrease by 62.8%. A negative coefficient indicates that there is an indirect relationship between HDI and poverty, the more the value of X2 increases, the more Y2 will decrease.

3. The coefficient of economic growth (Y1) is 0.006, which means that if other exogenous variables remain constant and Y1 increases by 1 point, then the poverty rate (Y2) will increase by 0.6%. A positive coefficient indicates that there is a unidirectional relationship between economic growth and poverty levels, the higher the value of Y1, the higher Y2 will be.

Analisis Sobel Test

Next, a significance test of the mediating variable (intervening) will be carried out and a Sobel test analysis which is one of the approaches used to measure the level of significance of the intervening variable (Ghozali, 2018, p.245). Sobel test analysis with the provision that if the z-value in absolute value> 1.96 or the level of statistical significance z (p-value) <0.05, it means the indirect effect of the independent variable on the dependent variable through the mediator variable (Preacher and Hayes, 2004). The following are the results of data processing using IBM SPSS to test the mediator variable with the Sobel test.

Table 3. Summary of Regression Test Coefficients Between Variables X1, X2, Y1 and Y2

Variabel	Coefficients Std. Error	Standardized Coefficients Beta	Sig.
X1 →Y1	5,283	-0,297	0,743
X2 →Y1	67,713	0,385	0,672
X1 →Y2	0,698	1,058	0,044
X2 → Y2	8,980	-1,810	0,003
Y1 → Y2	0,040	0,107	0,056
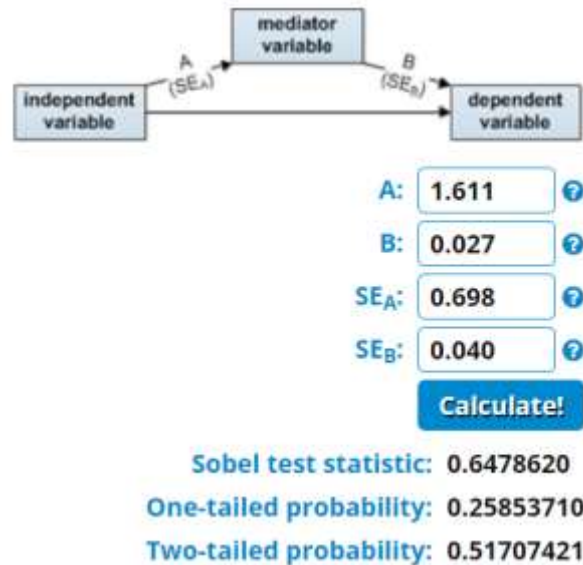
Picture 1

From the results of the Sobel test calculation, a p-value of 0.517 was obtained, which is greater than the alpha significance level of 0.05, so it can be interpreted that investment cannot mediate economic growth to poverty levels.
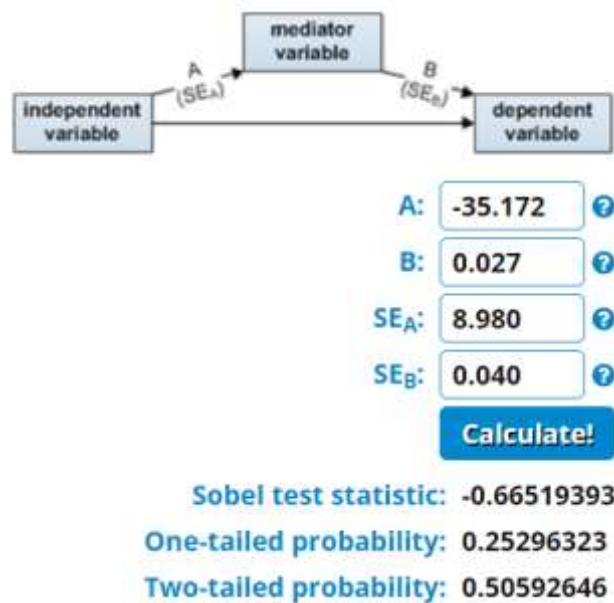
Picture 2

The calculation results using the Sobel test, obtained a p-value of 0.505 which is greater than the alpha significance level of 0.05 so that it can be interpreted that the HDI cannot mediate economic growth on poverty levels.

5. CONCLUSION

Investment has a positive but insignificant effect on economic growth in Balikpapan City because investment is not the only factor that plays a major role in increasing economic growth in Balikpapan City. The highest growth in 2023 occurred in the government consumption component (PK-Government), which was 32.59 percent. Although a fairly good increase in performance was also shown by the gross fixed capital formation (PMTB) element which grew by 5.82 percent. HDI has a positive and significant effect on economic growth in Balikpapan City. HDI measures the quality of life of the community which includes education, health, and income. Although an increase in HDI reflects an increase in the quality of human resources, its impact on economic growth is not immediately visible. This is because the benefits of improving the quality of life such as education and health take time to contribute significantly to the economy. Investment has a positive and significant effect on reducing poverty levels in Balikpapan City, where if investment increases, the poverty level will also increase. This can happen because the investment may not touch sectors that are directly related to poverty reduction. Existing investments tend to be capital-intensive rather than labor-intensive considering that Balikpapan City is a processing industry city. Investment should touch sectors that are directly related to poverty reduction and the distribution of benefits from investment may be even or in other words labor-intensive. This can also be due to inefficient investment allocation or not being on target as well as bureaucratic and regulatory factors that hinder investment effectiveness. HDI has a positive and significant effect on poverty levels in Balikpapan City. This can occur due to unequal access to education and health and the still high inequality of community income. Increasing HDI which includes improving education, health, and equal distribution of income contributes to the ability of individuals to escape poverty. Economic growth does not have a significant effect on poverty levels in Balikpapan City. This shows that increasing GRDP of a region is not necessarily able to reduce poverty, this is because GRDP per capita is not the basis for indicators of population welfare. GRDP only calculates all added value generated in a region without considering whether the residents of the area or not the residents of the area generate added value to GRDP. GRDP per capita divides the GRDP value evenly by the number of residents, so that there is income inequality

among population groups. Economic growth does not provide a mediating effect on the relationship between Investment and poverty levels in Balikpapan City. Non-inclusive and uneven economic growth causes the benefits of investment not to be felt by all levels of society. Economic growth does not provide a mediating effect on the relationship between HDI and poverty levels in Balikpapan City. Although increasing HDI improves quality of life, its impact on economic growth is indirect and non-inclusive growth does not have a significant impact on poverty reduction.

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