



Analysis of Factors Influencing the Level of Welfare of the Community of Balikpapan City

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Abstract. The purpose of this study is to determine the influence of factors that affect the level of public welfare in Balikpapan City in the period 2006-2023. The method used in the study is the quantitative data analysis method and the data analysis method using a path diagram with 4 dimensions of measurement, namely, the Level of Public Welfare measured by the Human Development Index (HDI), the Income Inequality Index measured by the Gini Ratio Index, Economic Growth, Population Growth Rate. The results of this study indicate that Economic Growth has a negative but insignificant effect on Income Disparity (Gini Ratio Index), Population Growth has a negative and significant effect on Income Disparity (Gini Ratio Index), Economic Growth directly has a positive but insignificant effect on the level of population welfare (Human Development Index), Population Growth directly has a negative but insignificant effect on the level of population welfare (Human Development Index), Income Disparity Level (Gini Ratio) has a positive and significant effect on the Level of Community Welfare (HDI) of Balikpapan City, Economic Growth through the Formation of Population Welfare (Gini Ratio Index) has a negative effect on the Level of Community Welfare (HDI) of Balikpapan City and Population Growth through the Formation of Population Welfare (Gini Ratio Index) has a negative effect on the Level of Community Welfare (HDI) of Balikpapan City.

Keywords: HDI, Income Inequality Index, Economic Growth, Population Growth

1. INTRODUCTION

Economic development is an effort to increase real income per capita in the long term and is followed by improvements in the institutional system. The main objective of development is to create public welfare and public welfare can be seen from the increase in economic growth and the even distribution of income (Arsyad, 2010). The geographical condition of Indonesia as an archipelago is one of the obstacles in implementing equitable development in each region. Regional autonomy policy is a means to create better development, because this policy will be able to increase economic growth and public welfare, where local governments will be more efficient in managing the resources available in each region and providing public goods to facilitate economic activities. Balikpapan City is an area that is famous as an oil and gas processing area through Pertamina, in addition Balikpapan City is also an industrial area and foreign contractor companies that are the backbone of economic growth in Balikpapan City. The first oil drilling in the Mathilda well by the JHMenten company and Firma Samuel And Co on February 10, 1897, was an important momentum for Balikpapan to become an Industrial City which until now has developed into the largest oil processing industry outside Java. The existence of this oil refinery plays a strategic role in supplying oil

and gas needs, especially in Eastern Indonesia. In its development, industrial activities in Balikpapan City have continued to grow, both industrial activities that support the oil processing industry and other industrial activities such as shipbuilding, wood, building materials and others.

On the other hand, human resources are the main component in the implementation of development as well as determining the success of regional development. Quality human resources are not only intellectually intelligent, but must also be emotionally intelligent and spiritually intelligent so that the combination of these three intelligences will produce competitive human resources and form smart people or an intelligent society. The development sector that has the most influence on human resources is education.

One of the measuring tools commonly used in seeing the level of human welfare 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 describe the results of the implementation of human development according to three very basic components of capability indicators, namely: health, quality of education and access to economic resources in the form of equal distribution of people's purchasing power.

In general, human development in Balikpapan City has continued to progress during the period 2010 to 2019 with an average annual increase of 0.60 percent. In 2010, the HDI of Balikpapan City was 75.35 and continued to increase every year and reached 80.11 in 2019. However, in 2020, the HDI of Balikpapan City decreased by 0.10 percent, to 80.01. However, this did not change the status of human development in Balikpapan City which has the status of "Very High", along with 36 other districts/cities throughout Indonesia. The HDI has played two key roles in the field of applied economic development: (1) as a tool to popularize human development as a new understanding of welfare, and (2) as an alternative to GDP per capita as a way to measure the level of development for comparison between countries and over time (Elizabeth, 2007). The aspects of economic growth and equal distribution of income are very important in efforts to improve people's welfare. Increased economic growth and equitable distribution of income will have an impact on improving health and education levels and will improve the productivity of the workforce.

2. LITERATURE REVIEW

Level of Community Welfare

UNDP introduced an indicator that it has developed, namely an indicator that can describe the development of human development in a measurable and representative manner, called the Human Development Index (HDI). The HDI is a measure that describes the achievement of community welfare in terms of education level, health quality and increasing community welfare. In the HDI there are four indicators, namely life expectancy, literacy rate, average length of schooling and purchasing power (economic).

Income Inequality Index

The theory expressed by Simon Kuznets which explains the income distribution cycle that in the early stages of economic growth, income distribution tends to worsen (uneven), but in the next stage, income distribution in the next phase tends to improve (inequality decreases). However, in the understanding of contemporary economics, the theory expressed by Kuznets cannot really explain the real conditions because even though the cycle occurs, everything still depends on the development process carried out by the country concerned (Todaro, 2006).

Economic Growth

According to Rostow, economic growth can be interpreted as a process that causes changes in people's lives, namely political changes, social structures, social values, and the structure of their economic activities. Meanwhile, according to Prof. Simon Kuznets, economic growth is defined as a long-term increase in a country's ability to provide more and more types of economic goods to its population where this ability grows in accordance with technological advances, and the institutional and ideological adjustments it requires. In addition, in his earlier book *Modern Economic Growth* in 1966, he defined economic growth as a continuous increase in per capita or per worker product, often followed by an increase in population and usually with structural changes (Jhingan, 2004).

Population Growth

A population is an individual who has settled in an area for at least six months or less than six months but intends to settle. Hartono, in his book explains that the population is everyone who lives in an area with a certain agreement (conditions that have been met). Dwi Puspa, in his research, states that population growth is the process of changing the number of residents and their composition which is influenced by three demographic components, namely: fertility, mortality, and migration. So, population growth is the change in the number of people from one period to the next in an area.

3. METHOD

The analysis tool used is path analysis. Path analysis is an analysis method used in research to test the effect of independent variables on dependent variables, including indirect effects through mediating intervening variables. This method is more complex than ordinary regression analysis and requires a deep understanding. The analysis application used in this study is using the SPSS v25 application. Where the variables used in this study are as follows.

$$Y1 = \alpha_0 + \alpha_1 X_1 + \alpha_2 X_2 + e$$

$$Y2 = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 Y_1 + e$$

$$Y2 = \lambda_0 + Y_1 + e$$

4. RESULTS AND DISCUSSION

Path analysis of the variables of Economic Growth and Population Growth on Income Disparity (Gini Ratio Index) and Community Welfare (HDI) of Balikpapan City, can be seen in the following table:

Table 1. Economic and Population Growth Coefficients on Income Disparity (Gini Ratio) in Balikpapan City

Model Summary ^b					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.573 ^a	.329	.239	.07644	1.763

a. Predictors: (Constant), PP, PE
b. Dependent Variable: IG

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.043	2	.021	3.670	.050 ^b
	Residual	.088	15	.006		
	Total	.131	17			

a. Dependent Variable: IG
b. Predictors: (Constant), PP, PE

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	.403	.054		7.532	<.001		
	PE	-.010	.007	-.283	-1.330	.203	.991	1.009
	PP	-.048	.021	-.473	-2.223	.042	.991	1.009

a. Dependent Variable: IG

Based on the table above, it can be seen that in the Sig/significance column for Economic Growth is 0.203 or a probability greater than the set significance level of 0.05, then

Economic Growth does not have a significant effect on Income Disparity (Gini Ratio Index) so that Ho is accepted and Ha is rejected. In Population Growth, the Sig/significance column for Population Growth is 0.042 or a probability greater than the set significance level of 0.05, then Population Growth has a significant effect on the Gini Ratio Index so that Ho is rejected and Ha is accepted.

Table 2. Growth, Economy and Population Coefficients, and Income Disparity (Gini Ratio Index) as Mediating Variables on Community Welfare (HDI) in Balikpapan City.

Model Summary ^b							
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson		
1	.686 ^a	.471	.357	1.48838	.484		

a. Predictors: (Constant), IG, PE, PP
b. Dependent Variable: IPM

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	27.559	3	9.186	4.147	.027 ^b
	Residual	31.014	14	2.215		
	Total	58.573	17			

a. Dependent Variable: IPM
b. Predictors: (Constant), IG, PE, PP

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	75.712	2.280		33.208	<.001		
	PE	.093	.147	.131	.634	.536	.886	1.128
	PP	-.500	.480	-.235	-1.042	.315	.745	1.342
	IG	11.981	5.027	.566	2.383	.032	.671	1.489

a. Dependent Variable: IPM

Based on the table above, it can be seen that in the Sig/significance column for Economic Growth is 0.536 or a probability greater than the set significance level of 0.05, then Economic Growth does not have a significant effect on Community Welfare (Human Growth Index) so that Ho is accepted and Ha is rejected. In Population Growth, the Sig/significance column for Population Growth is 0.315 or a probability greater than the set significance level of 0.05, then Population Growth does not have a significant effect on Community Welfare (Human Growth Index) so that Ho is accepted and Ha is rejected. In Income Disparity (Gini

Ratio Index) as a mediating variable, the Sig/significance column for Income Disparity (Gini Ratio Index) is 0.032 or a probability smaller than the set significance level of 0.05, then Income Disparity (Gini Ratio Index) has a significant effect on Community Welfare (Human Growth Index) so that Ho is rejected and Ha is rejected.

Sobel Test Analysis

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	Ustandardized Beta	Sig.
X1 → Y1	0,007	-0,10	0,203
X2 → Y1	0,021	-0,048	0,042
X1 → Y2	0,147	0.093	0,536
X2 → Y2	0,480	-0,500	0,315
Y1 → Y2	5,027	11,981	0,032

The following are the output results of data processing using IBM SPSS output data to test mediation variables with the Sobel test.

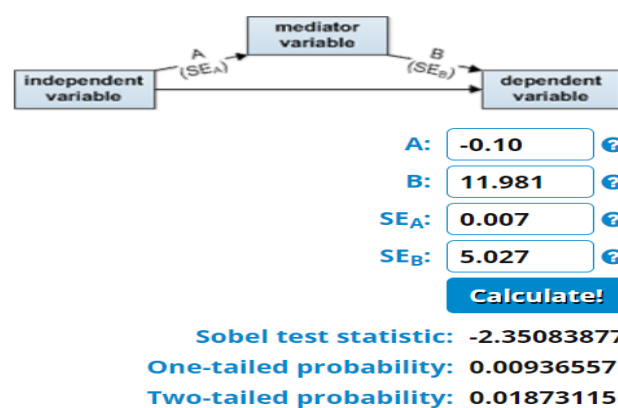


Figure 1. Sobel Test X1 Against Y2 Through Y1

Based on the results of the Sobel test showing a probability value of 0.0187 < 0.05, it is proven that income inequality (Gini Ratio Index) can mediate economic growth towards community welfare (Economic Development Index).

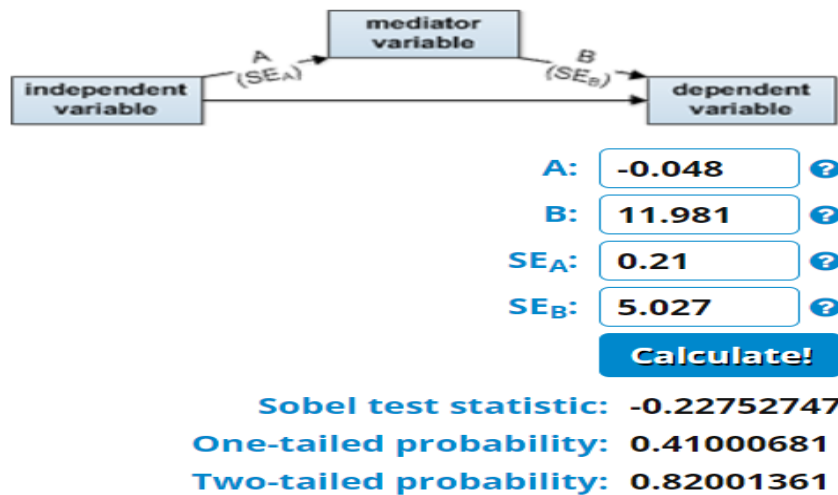


Figure 2. Sobel Test X2 Against Y2 Through Y1

Based on the results of the Sobel test, the probability value is $0.82 > 0.05$, so it is proven that the income gap (Gini Ratio Index) cannot mediate population growth towards community welfare (Economic Development Index).

5. CONCLUSION

Economic Growth has a negative but insignificant effect on Income Disparity (Gini Ratio Index). High Economic Growth in Balikpapan City will be able to reduce the income gap or Gini ratio of Balikpapan City, this can happen because in macro terms high economic growth will be able to open up employment opportunities, so that income distribution can be spread relatively widely. Population Growth has a negative and significant effect on Income Disparity (Gini Ratio Index). This Population Growth is not balanced with adequate employment and education and income, generally from migration (Population Movement) who come to Balikpapan City with low education and skills, also low education so that HR capabilities are unable to compete in the world of work so that it will cause unemployment in even becoming a burden on the population in improving the welfare of the people of Balikpapan City. Economic Growth has a direct positive but insignificant effect on the level of population welfare (Human Development Index). Economic growth often increases per capita income. With increasing income, people have more resources to meet basic needs, such as food, clothing, and decent housing. This directly contributes to improvements in health, education, and living standards, which are key components of the HDI. However, if economic growth is accompanied by increasing income inequality (higher Gini ratio), the positive impact on the HDI may be reduced. High income inequality can limit access to health and education services

for most people, which reduces general welfare. Population growth has a direct negative but insignificant effect on the level of population welfare (Human Development Index). Moderate population growth can support an increase in the HDI if accompanied by improvements in infrastructure and public services. Population growth increases the workforce which can contribute to economic growth. The level of income inequality (Gini ratio) has a positive and significant effect on the level of community welfare (HDI) in Balikpapan City. The Gini ratio plays an important role in mediating the relationship between economic growth, population growth, and HDI. High income inequality tends to reduce the positive effects of economic growth and exacerbate the negative impacts of unmanaged population growth. Economic Growth through the Formation of Population Welfare (Gini Ratio Index) has a negative effect on the Level of Community Welfare (HDI) of Balikpapan City. Economic growth in Balikpapan City can have a significant impact on the level of community welfare, especially through the effects it has on the Gini ratio index. Inclusive and equitable economic growth can reduce income inequality, which will increase access to health services, education, and better living standards, but uneven economic growth can worsen income inequality and reduce community welfare. Therefore, it is important to implement policies that ensure that the benefits of economic growth can be felt by all levels of society. Population Growth through the Formation of Population Welfare (Gini Ratio Index) has a negative effect on the Level of Community Welfare (HDI) of Balikpapan City. Rapid population growth without adequate infrastructure development can reduce the HDI. Inequality in access to basic services such as health and education can increase, which is reflected in a higher Gini ratio index, and ultimately reduces community welfare.

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