



THE EFFECT OF POPULATION GROWTH AND ECONOMIC GROWTH ON POVERTY LEVELS IN THE PROVINCE OF GORONTALO IN 2011-2020

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Article history:	Abstract:
Received: 7 th December 2021 Accepted: 6 th January 2022 Published: 13 th February 2022	This study aims to determine the effect of population growth and economic growth on the poverty level of districts/cities in 2011-2020. The data used is secondary data from the Central Statistics Agency (BPS) of Gorontalo Province and the method used is descriptive quantitative with multiple linear analysis and panel data. The results of the analysis show that population growth and economic growth can increase poverty in districts/cities in Gorontalo Province in 2010-2020, population growth has a positive and significant effect on poverty levels in Gorontalo Province in 2010-2020. This means that every increase in population growth will increase poverty in Gorontalo province. Economic growth has a positive and insignificant effect on the poverty level of the province of Gorontalo in 2010-2020. This means that every increase in economic growth will increase provincial poverty, but the increase in poverty cannot be explained significantly by increased economic growth.

Keywords: Population Growth, Economic Growth, Poverty.

INTRODUCTION

Poverty is one of the obstacles faced by all countries. In developed and developing countries, poverty has long been the deepest and most difficult problem in the world (Ishartono, 2016). Furthermore, poverty is a global problem, especially in developing countries. The problem of poverty is not new in Indonesia, which is a member of ASEAN countries and is categorized as a developing country. Almost all Indonesian governments view poverty as a development problem. Efficiency is the most important factor in reducing the number of poor people in tool selection and economic development strategies (Suhandi et al, 2018).

The problem of poverty can be influenced by the achievement of several factors, including population growth. Population growth is the change in the number of people in an area over a certain period of time. Population spikes cause serious welfare and development problems, and when many are not compensated with high financial aid, they lead to poverty and general national instability, among other problems. Therefore, efforts are needed to increase the workforce every year by improving facilities and infrastructure and recruiting superior talents. (Sukirno, 2011).

Economic growth is one of the most important indicators for assessing economic performance, especially in analyzing the results of national or regional economic development. The economy is expected to grow from year to year in line with the increase in the production of goods and services. Thus, economic growth reflects a period in which economic activity can bring people more income or wealth in a certain period. The stable and rapid economic growth of a country or region means that the economy of a country or region is developing well. (Agustina, 2010)

The relationship between population growth and economic growth is positive because more and more population is a growth factor, the economy grows, but on the contrary, population decline causes setbacks and becomes difficult to take, namely by developing the economy and reducing poverty levels. Based on the details and the amount of data available, the researcher will study how the population and economy affect the poverty rate in Gorontalo province. This study aims to determine the Effect of Population Growth and Economic Growth on Poverty Levels in Gorontalo Province in 2011-2020

RESEARCH METHODS

This research uses descriptive quantitative by using panel data within a certain period of time (time series). This research was conducted in Gorontalo Province which consists of 5 regencies 1 city, which is divided into several regions, namely Gorontalo Regency, Boalemo Regency, North Gorontalo Regency, Bone Bolango Regency, Pohuwato Regency and Gorontalo City. The object of data in this study consists of data on population growth, economic growth, poverty. The type of data to be used is secondary data and is obtained through data published on the official website

of the Central Statistics Agency (BPS) of Gorontalo Province. The data used is panel data which is a combination of Cross Section and Time Series data. The Cross Section data used is based on 5 districts and 1 city in Gorontalo Province and for Time Series data using 2010-2020 data. The analytical technique used is quantitative analysis, the analytical method used is multiple linear regression analysis using panel data(Widarjono, 2009). In estimating the regression model with panel data, there are three approaches that are often used, namely the Common Effects model, the Fixed Effect model, and the Random Effect model.

Based on the Chow and Hausman tests, the best panel data regression model was determined using FEM. The results of the regression model estimation and panel data selection above, then the results of panel data regression analysis using the Fixed Effects Model (REM) model. The estimated output using FEM is presented in the table below :

Table. 1 Estimation Result of Fixed Effect Model

Dependent Variable: POV?
 Method: Pooled EGLS (Cross-section weights)
 Total pool (balanced) observations: 60
 Linear estimation after one-step weighting matrix

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	5.127234	1.411660	3.632061	0.0006***
POPg	0.148283	0.006196	23.93198	0.0000***
Eg	8.43E-05	6.25E-05	1.348828	0.1832 ^{NS}
R-squared	0.971354	Mean dependent var		77.01914
Adjusted R-squared	0.967498	S.D. dependent var		37.90216
S.E. of regression	5.000202	Sum squared resid		1300.105
F-statistic	251.8987	Durbin-Watson stat		1.787784
Prob(F-statistic)	0.0000***			

Keterangan : ***) signifikan di 1% dan **) signifikan di 5% *) Signifikan 10% ns) Not Signifikan

Source: Output Eviews 9

The interpretation of the estimation and model above is as follows: (1) Poverty (POV) without being influenced by any variables in the model will be worth 5.127234 Thousand Souls ; (2) Population Growth (POPg) has a positive effect on Poverty (POV). This means that every 1 unit increase in population growth will increase poverty by 0.148283 Thousand Souls.; (3) Economic growth (Eg) has a positive effect on Poverty (POV). This means that every 1 unit increase in economic growth will increase poverty by 8.43 thousand people.

Partial Test

The t-test is used to determine how far one independent variable individually can explain the dependent variable. Based on Table 1 above, it can be seen that: (1) population growth has a significant effect on poverty levels in Gorontalo Province, If the p-value is compared with a significance level of 1%, the p-value obtained is still smaller than 1% so Ho is rejected α . Economic growth has a significant effect on the poverty level of Gorontalo Province,. If the p-value is compared with the entire significance level, the p-value obtained is still greater than the alpha (1%, 5%, 10%) used in Ho research is accepted.

Simultaneous Test (f)

The F test is used to determine whether the independent variables together have a significant effect on the dependent variable. Based on Table 1, the p-value is smaller than the significance level value (α 1%). This means that the independent variables jointly affect the dependent variable.

Multicollinearity Test

Multicollinearity Test Aims to test whether there is a high or perfect correlation between the independent variables contained in the regression model. A good regression model should have no correlation between independent variables.

Table 2. Multicollinearity Test

Variance Inflation Factors
 Included observations: 66

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	16.63788	941.5636	NA
POPg	0.000863	1731.394	4.330247
Eg	8.15E-09	177.7746	4.330247

Source: Output Eviews 9

Table 2 above shows that the median VIF value for the two independent variables is less than 10 (VIF < 10), so there is no evidence of a multiple relationship between the independent variables in the model.

DISCUSSION

The effect of population growth on the poverty rate in the province of Gorontalo 2011-2020

Based on the results that have been carried out, it is known that the effect of population growth is positive and significant on poverty. This means that every increase in population growth will increase poverty in Gorontalo province. Indicators of population growth can be seen from the number of people who increase every year in an area, the same thing is also in poverty which can be seen from the number of poor people who increase every year.

The correlation given by population growth to poverty is positive, in other words population growth is one that can increase poverty in Gorontalo Province. According to Azizah et al (2018), it is identified that every year the number of residents in a place or region increases along with the number of births. If the population is not controlled, the poverty rate increases every year as the population grows, which is a problem for the community. Due to the large population, it is difficult for the government to create jobs for the community.

The effect of economic growth on the poverty rate in the province of Gorontalo in 2011-2020

Based on the results that have been carried out, it is known that the effect of economic growth is positive and not significant on poverty. This means that every increase in economic growth will increase poverty in the province of Gorontalo, but the increase in poverty cannot be explained significantly by an increase in economic growth.

The poor are defined as those who cannot participate in economic, cultural, social and political activities in the community. Thus, the forms of poverty are not only one-dimensional, but also include the loss of dignity and worth as people participate in economic development. A poor life profile reveals how well the government is aware of its disability and people's participation in sustainable development. Poverty hinders their development, hinders society as a whole, and hinders development itself.

In the context of economic growth that has a positive effect on poverty, this is caused by the flow of finance and income in the economy of districts and cities in Gorontalo Province which only flows to the upper middle income group or in other words income inequality occurs.

CONCLUSION

Based on the results and discussion in the previous chapter regarding the effect of population growth and economic growth on poverty, the researchers can draw a conclusion, namely: 1) Population growth has a positive and insignificant effect on poverty. This means that every one unit increase in economic growth will increase poverty, so that the increase can be explained significantly. 2) Economic growth has a positive effect on poverty, economic growth has an insignificant effect on poverty. This means that every one unit increase in economic growth will increase poverty, but an increase in economic growth cannot explain the increase in poverty.

REFERENCES

1. Azizah, EW, Sudarti, S., & Kusuma, H. (2018). The Effect of Education, Per capita Income and Population on Poverty in East Java Province. *Jie Journal of Economics*, 2(1), 167-180.
2. Adisasmita, Rahardjo. 2005. *Fundamentals of Regional Economics*. Yogyakarta: Graha Ilmu
3. Central Bureau of Statistics. (2021). *Regional Overview Based on Regency/City GDP 2016-2020*. Jakarta: Directorate of Production Balance.
4. Istianto, Dwi, Donna. (2011), *Analysis of Factors Affecting Advertising Tax Revenue in Semarang Regency in 2000-2009*. Thesis of the Faculty of Economics, Diponegoro University.
5. Irawan, & Suparmoko. (1992). *Development Economics and Planning*. Puspa, D., & Iggti, K. (2016). Analysis of the Effect of Economic Growth, Population Growth and Inflation on Poverty Levels in East Java in 2004-2014. *Journal of Economics and Business*, 1(2), 257-282.
6. Suhandi, N., Putri, EAK, & Agnisa, S. (2018). Analysis of the Effect of Population on Total Poverty Using Linear Regression Method in Palembang City. *Scientific Journal of Global Informatics*, 9(2), 77-82. <https://doi.org/10.36982/Jig.V9i2.543>
7. Sukirno, Sadono. 2011. *Macroeconomic Theory Introductory Third Edition*. Rajawali Press, Jakarta.
8. Widarjono, A. 2009. *Introduction to Econometrics and Its Applications*. Yogyakarta: Echonesia.
9. Widiastuti, AS (2021). The Effect of ZIS, Economic Growth, Unemployment and Inflation on Poverty Levels in Indonesia. *Maro: Journal of Islamic Economics and Business*, 4(1), 80-90.
10. Handayani, S., & Hasmarini, IMI (2017). *Analysis of the Effect of Economic Growth, Population, and Education on Poverty in Central Java 2011-2015* (Doctoral Dissertation, University of Muhammadiyah Surakarta).
11. Jonaidi Arius. (2012). "Analysis of Economic Growth and Poverty in Indonesia". *Journal of Economic Studies*, (Vol 1 No 1), pp. 140-164.
12. Greene, WH 2008. *Econometric Analysis Sixth Edition*. New Jersey: Prentice Hall.