

Variables that impact the poverty in regencies/cities of Bali province

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Abstract

This study aims to analyze the effect of economic growth, school enrollment rates, village funds and labor force participation rates simultaneously and partially on poverty rates in regencies/cities of Bali Province, as well as determine the variables that have a dominant effect. The study used secondary data with 54 observation points, which were analyzed using panel data regression analysis techniques. The results of the study show that economic growth, school enrollment rates, village funds and labor force participation rates have a significant effect on poverty in the regencies/cities of Bali Province. Partially, economic growth, school enrollment rates, and labor force participation rates have no significant effect on regencies/city poverty in the Province of Bali, while village funds have a negative and significant effect on regencies/city poverty in the Province of Bali. The variable that has the dominant influence on reducing regencies/city poverty in the Province of Bali is village funds.

Keyword: Poverty; Economic Growth; Education; Village Fund; Labor Force

1 Introduction

Poverty is often regarded as a very complex problem, which is of concern to the world. Poverty cannot be viewed from one side only, so various approaches are needed in determining factors that are thought to influence poverty [1]. Poverty can be interpreted as the condition of a person or group of people who feel deficient in meeting their life needs, including cultural needs and social needs [2]. Poverty is also often said to be a reflection of the level of welfare of a country [3], including in Indonesia. The high poverty rate in Indonesia has encouraged the government to issue various policies as an effort to alleviate poverty.

One area that although it has high regional income, is still struggling in poverty, namely the Province of Bali [4]. Disparities in poverty levels are also visible between regencies/cities in Bali Province, although the government always tries to implement strategies through the implementation of programs that are pro-people and updating facilities to facilitate access to public services such as house renovation programs, Bali Mandara Health Insurance cards (JKBM), Integrated Agricultural System program (Simantri), The Integrated Village Development Movement (Gerbang Sadu) [5].

Figure 1 shows that there is a clear gap in poverty levels between regencies/cities in the Province of Bali. This is due to differences in the number of tourist objects as the main source of regional income and differences in regional fertility so that agricultural potential is less developed. In addition, inadequate infrastructure is also a problem. According to the Central Bureau of Statistics (BPS) for the Province of Bali, there are differences in the number of poor people in cities and villages, with a higher percentage in urban areas [6]. This is because urban areas quickly feel the effects of economic turmoil such as the Covid-19 pandemic which rapidly affects the urban economic structure, resulting in a weakening of economic activity leading to employee layoffs.

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The causes of poverty can be seen from both the macro and micro sides. This study will focus on several variables that predict the causes of poverty, such as economic growth, school enrollment rates, village funds, and labor force participation rates. Economic growth theoretically describes how an area can absorb labor, so that people have income, and in the long run can reduce poverty [7]. However, in fact, economic growth in the province of Bali has not been able to resolve the existing poverty inequality, so it needs to be studied further. The problems found in regional development policies include natural resources, the quality of human resources to physical resources [8].

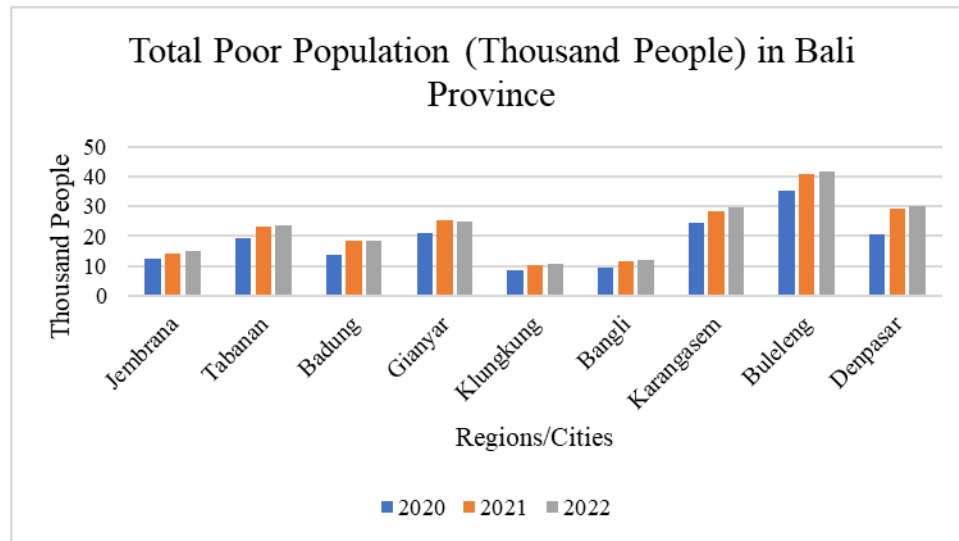


Figure 1 Total Poor Population (Thousand People) in Bali Province

Education has a close relationship with the quality of the resources produced. The low level of public education, especially in remote areas, is due to limited access to educational facilities. In contrast to urban areas that can easily obtain education. Education plays an important role in developing human capital to get a decent job [9]. Evidenced by several empirical studies that found a negative relationship between the level of education and poverty. The low level of education is also caused by the lack of income of parents so that children cannot get higher education. Based on information obtained from BPS Bali Province, the average length of community schooling is 9.39 years in 2022. While the current job needs see education as one of the important qualifications. This then causes people to have difficulty getting decent jobs so that the poverty rate is still high.

In an effort to advance education in the regions, the government can rely on the village funds it has. In several empirical studies, it has been found that the more village funds are provided, the less poverty there will be in the area [10,11]. Proper allocation of village funds such as managing sources of income optimally and using the budget properly will be able to prosper the community [12]. The problems found were a lack of supervision in the management of village funds such as low inspection of village financial management, difficulties in channeling public complaints, and unclear evaluation and supervision from related parties [13].

The last factor that is thought to influence poverty is the labor force participation rate. In this case, workers do not only come from men, but the role of women in the world of work also contributes to reducing poverty. This is because the high cost of living encourages women to participate in the field of work. The more women working, the more income the family receives, so they will be able to meet their basic needs and other needs. Empirical studies have found that the higher the labor force participation rate, the fewer people who are unemployed, the more income they receive which will ultimately reduce poverty.

Many studies on poverty have been carried out, but these findings show different results with different variations of the variables. The persistence of poverty disparities found between regencies/cities is of concern to researchers to conduct further studies on poverty by focusing on the variables of economic growth, school enrollment rates, village funds, and labor force participation rates by taking research locations in regencies/cities in Province of Bali, with annual data from 2015 to 2021.

2 Materials and methods

2.1 Research Variables

The research variables are divided into two, namely the independent variable and the dependent variable. The independent variables are economic growth (X_1), school enrollment rate (X_2), village funds (X_3), labor force participation rate (X_4). While the dependent variable is the poverty rate (Y).

2.2 Data Sources

This study uses secondary data, namely data obtained from third parties or data that has been published. The selected source is data from the Central Statistics Agency (BPS) of Bali Province.

2.3 Observation Points

The observation points in this study were in nine regencies/cities of Bali Province from 2015 to 2020 (6 years), so the sample size was 54 observations.

2.4 Data Analysis Techniques

Data research was analyzed using panel data regression. The general model of semi-log panel data regression is expressed in the form of the following equation [14].

$$Y_{it} = \alpha + \beta_1 x_{1it} + \beta_2 x_{2it} + \beta_3 x_{3it} + \beta_4 x_{4it} + e_{it}$$

Information:

- Y_{it} = Poverty Rate
- α = Constant Value
- X_1 = Economic Growth
- X_2 = School Participation Rate
- X_3 = Village Fund
- X_4 = TPA
- β_1 = Regression Coefficient of Economic Growth (X_1)
- β_2 = Regression Coefficient of School Enrollment Rate (X_2)
- β_3 = Regression Coefficient of Village Funds (X_3)
- β_4 = Regression Coefficient of LFPR (X_4)
- e = term error
- t = Time
- i = Regencies/Cities in Bali Province

3 Results and discussion

3.1 Classical Assumption Test Results

3.1.1 Normality Test

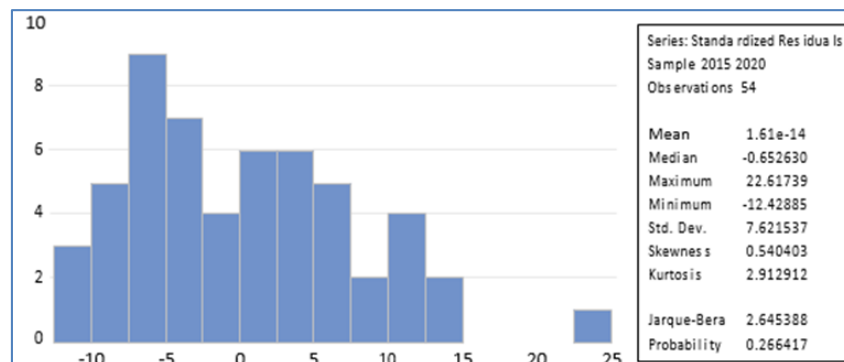


Figure 2 Normality Test Results

Tests were carried out to determine whether the data used was normally distributed or not. The results found a jarque-bera value of 2.645 with a p value of 0.2664 > 0.05, it was concluded that the data was normally distributed.

3.1.2 Multicollinearity Test

Tests were carried out to find out whether there was a correlation between research variables, by using a *Variance Inflation Factor* (VIF) test. The test results show none of the variables has a correlation > 0.8 so that it can be said that there is no multicollinearity problem.

Table 1 Multicollinearity Test Results

VARIABLE	X1	X2	X3	X4
X1	1.000000	-0.136827	-0.285424	-0.004377
X2	-0.136827	1.000000	-0.036057	-0.588604
X3	-0.285424	-0.036057	1.000000	0.204455
X4	-0.004377	-0.588604	0.204455	1.000000

3.1.3 Heteroscedasticity Test

Tests were conducted to find out whether there is an inequality of variance from the residual one observation to another. Based on the results of the analysis, the p-value of each variable is > 0.05 so it can be concluded that there are no symptoms of heteroscedasticity.

Table 2 Heteroscedasticity Test Results

Variables	coefficient	std. Error	t-Statistics	Prob.
C	5.567906	4.418088	1.260252	0.2135
X1	-0.026013	0.018774	-1.385553	0.1722
X2	-0.009701	0.033957	-0.285677	0.7763
X3	-0.129965	0.114538	-1.134688	0.2620
X4	-0.022283	0.028261	-0.788462	0.4342
R-squared	0.068824	Mean dependent var		0.768696
Adjusted R-squared	-0.007190	SD dependent var		0.670235
SE of regression	0.672641	Akaike info criterion		2.132810
Sum squared residue	22.16983	Schwarz criterion		2.316976
Likelihood logs	-52.58588	Hannan-Quinn criter.		2.203836
F-statistics	0.905411	Durbin-Watson stat		1.593953
Prob(F-statistic)	0.468180			

3.2 Results of Multiple Linear Regression Analysis

Based on the estimation model selection test, the Random Effect Model (REM) was selected as the appropriate model. The results of the regression analysis produced are as follows.

$$Y = 47.068 + 0.013 X_1 - 0.710X_2 - 1.400X_3 + 0.128X_4$$

Table 3 Estimation Results of Random Effect Models

Variables	coefficient	std. Error	t-Statistics	Prob.
C	47.06869	12.65751	3.718637	0.0005
X1	0.013695	0.033038	0.414538	0.6803
X2	-0.170267	0.143906	-1.183188	0.2424
X3	-1.400850	0.241776	-5.794001	0.0000
X4	0.128306	0.081089	1.582278	0.1200
R-squared	0.509626	Mean dependent var		1.068998
Adjusted R-squared	0.469596	SD dependent var		1.608845
SE of regression	1.171703	Sum squared residue		67.27155
F-statistics	12.73095	Durbin-Watson stat		1.008800
Prob(F-statistic)	0.000000			

3.2.1 Simultaneous Test Results

The calculated F value is 12.730 with a significance level of 0.000 which is less than 0.05, and the F table value is 2.79 (38.23619 > 2.79) which means that economic growth, school enrollment rates, village funds and labor force participation rates have a significant effect simultaneously on poverty in the regencies/cities of Bali Province.

3.2.2 The Effects of Economic Growth (X₁) on the Poverty Level (Y) of Regencies/Cities in the Bali Province

Coefficient value of economic growth (X₁) is 0.013 with a significance level of 0.6803 > 0.05 so that the economic growth has a positive and insignificant effect on regencies/cities poverty in the Province of Bali. This can be caused by the lack of quality of economic growth as reflected by the poverty rate which is relatively persistent above 20 percent in the last ten years [15]. The data found states that there is an imbalance between rural and urban areas, limited potential resources also inhibit regional economic growth so that economic growth has not been able to significantly affect poverty.

3.2.3 The Effect of School Enrollment Rates (X₂) on The Poverty Rate (Y) of Regencies/Cities in the Bali Province

Coefficient value of school enrollment rate (X₂) is -0.170 with a significance level of 0.2424 > 0.05 so that the school enrollment rate has a negative and insignificant effect on regencies/cities poverty in the Province of Bali. This is presumably due to difficulties in accessing education, as discussed earlier that the average education of the Balinese population is still low while education is very important in supporting the quality of resources. This causes the research results do not have a significant effect.

3.2.4 The Effect of Village Funds (X₃) on the Poverty Level (Y) of Regencies/Cities in the Bali Province

Village fund coefficient value (X₃) is -1400 with a significance level of 0.000 < 0.05, so that the village funds have a positive and significant effect on regencies/cities poverty in the Province of Bali. These results indicate that improving the quality and expanding the scope of these basic services requires investment in quality human resources and will ultimately increase the productivity of the poor [16]. In addition, effective and efficient management of village funds encourages the community to develop their capabilities and potential so that they can provide a way to escape poverty [17].

3.2.5 The Effect of Labor Force Participation Rate (X₄) on Regencies/cities Poverty Rate (Y) in Bali Province

Coefficient value of Labor Force Participation Rate (X₄) is 0.128 with a significance level of 0.1200 > 0.05, so the Labor Force Participation Rate has a positive and not significant effect on regencies/cities poverty in the Province of Bali. This can be caused because even though there is an increase in the number of the workforce even though the level of education has increased, without being accompanied by an increase in available jobs, it will only increase unemployment which directly increases poverty.

3.2.6 *Dominant Influential Variables*

The most influential variable in this study is village funds, with a significance value of $0.000 < 0.05$ where this value is the most significant value compared to other variables.

4 Conclusion

The results of the research analysis concluded that simultaneously economic growth, school enrollment rates, village funds and labor force participation rates have a significant effect on poverty in the regencies/cities of Bali Province. The results of the partial test found insignificant results, such as the economic growth variable with a positive effect, the school enrollment rate variable with a negative effect, and the labor force participation rate variable with a positive effect. Meanwhile, the village fund variable partially has a negative and significant effect on regencies/cities poverty in Bali Province. The variable that has the dominant influence is village funds. From these findings, it is suggested to the government to be able to develop a village fund program through improving the quality of education to build the quality of human resources, accompanied by the development of investments that can absorb labor.

Compliance with ethical standards

Acknowledgments

This research uses secondary data from BPS Bali Province, we thank you for the data that has been published so that researchers can complete this research properly.

Disclosure of conflict of interest

This research was conducted with the aim of completing the final study assignment to get a bachelor's degree in economics, accompanied by a lecture as the second author.

Statement of informed consent

The study did not involve any information about any individual, so the authors did not need to write informed consent.

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