The Effect of Unemployment Rate, Education Level, and Economic Growth Rate on Poverty Levels in districts / cities in Bali Province

Dewa Ayu Sri Astari¹, Made Suyana Utama ²

¹ Department of Economics, Udayana University, Denpasar, Bali, Indonesia
² Department of Economics, Udayana University, Denpasar, Bali, Indonesia

Abstract
Poverty has become a complex problem in every region in Indonesia in terms of open unemployment, education and economic growth. The purpose of this study was to analyze the effect of unemployment rate, education level, and economic growth rate on poverty levels in regencies / cities in Bali Province. The data used in this research is secondary data, and data collection is done by using documentation techniques. The analysis technique used in this research is multiple linear regression which is equipped with panel data analysis method, and classical assumption test. Based on the results of the test analysis, it was found that simultaneously the unemployment rate, education level, and economic growth rate had an effect on the district / municipal poverty level in Bali Province. Partially the unemployment rate has a positive (significant) effect on the poverty level of districts / cities in Bali Province. The level of education has a negative (significant) effect on the poverty level of districts / cities in Bali Province. The level of economic growth has no effect on the poverty level of districts / cities in Bali Province.

Keywords: Unemployment, Education, Economic Growth, Poverty

1. Introduction
Poverty has become a problem that occurs in every country. Poverty does not only occur in developing and underdeveloped countries but also experienced by developed countries. The problem of poverty is indeed a complex and multidimensional problem. Therefore, poverty alleviation efforts must be carried out comprehensively, covering various aspects of community life, and carried out in an integrated manner. Historically, most studies have concluded that poverty rates are higher in rural areas and that aid efforts have traditionally focused on rural areas (Kimberly, 2011). Reducing poverty is one of the main challenges for the new millennium, facing this challenge requires an effective poverty reduction policy and requires an understanding of the underlying welfare dynamics and determines how individuals and households move out of poverty over time (Naschold, 2009).

Poverty is a level of life that is below the minimum standard of living needs set based on basic food needs that make people work and live healthy, based on the need for rice and nutritional needs (Wahyu, 2018). The inability of the community to meet food needs ultimately affects the inability to meet nutritional needs which has an impact on health, poverty also makes a person unable to meet their educational needs. In the end, low education will cause people to be unable to compete in the workforce, thus creating unemployment. Poverty also has an impact in the social sector, such as crime and social jealousy, so that poverty is said to create an unsafe situation in society. To measure poverty, BPS uses the concept of ability to meet basic needs. With this, poverty is seen as an inability on the economic side to meet basic food needs (Windia, 2015).

The uniqueness of the island of Bali is in its economic structure, this uniqueness is due to the fact that some of the livelihoods of people in Bali depend on the tertiary sector (tourism), while other sectors only serve as supporters (Margareni, 2016). The province of Bali which is famous for its tourist destinations is also not free from the problem of population poverty. The problem of population poverty in Bali Province can be shown from the inequality of the poor in districts / cities in Bali Province. Several factors that can affect the level of poverty are unemployment, education and economic growth. Unemployment is a condition that cannot be avoided, both in developing countries and in developed countries.
Unemployment is generally caused because the number of workforce or job seekers is not proportional to the number of job opportunities or job opportunities available (Prayuda, 2016). Unemployment has a strong relationship to the level of poverty, high unemployment will cause reduced income which will eventually experience poverty, with that unemployment has a positive relationship with poverty.

Education not only affects higher wages but also influences their behavior and decisions which will increase the likelihood of success in achieving different basic needs (Blanca, 2007). Education is an investment in human resources in order to get a better life. Education needs to get the spotlight in overcoming ignorance and backwardness in its socio-economy. Education plays an important role in reducing poverty through improving productivity and training for the poor so that it will increase income according to Arsyad (2010). Individuals with higher education usually have greater access to get a higher job with higher pay compared to individuals who received less education (Bureau, 2013).

Economic growth is defined as an increase (GDP) on a national scale and (PDRB) for a regional scale, namely the total value of goods and services produced by an economy in a certain period (Rini, 2018). Economic growth shows the extent to which economic activity can generate additional income or social welfare in a certain period (Ashcroft, et al. 2008). Economic growth and poverty reduction have a direct relationship that will occur in the short term, while in the long term it will occur if it is followed by other factors that influence indirectly (Sheilla, et al., 2017). According to Kuznet (Tambunan, 2001) growth and poverty have a very strong correlation, because in the early stages of the development process the poverty rate tends to increase and at the final stage of development the number of poor people gradually decreases.

2. Literature Review

Priyo Adi Nugroho (2015)
The unemployment variable has a positive relationship with the poverty level, according to him the bad effect of unemployment is reducing people's income which in turn will increase their chances of being trapped in poverty because they do not have income.

Herry Faisal (2013)
It is said that the level of education has a negative effect on poverty, which means that the higher a person's education level will have a great opportunity to be freed from poverty, on the contrary, if a person's education level is lower, he will have a small chance to be free from poverty.

Putu Noppy Iswara (2016)
Stating that economic growth has a positive relationship to poverty and concluding that an increase in economic growth will increase poverty. Although economic growth has increased, there is still an imbalance in income distribution, which will cause poverty to increase.

Spicker (2002)
Factors that cause the poverty can be classified into four factors. There are individual explanations that try to explain the poverty out of sight the personal characteristic of the poor people, familial explanations suggest that the poverty come from family descent, subcultural explanations suggest the poverty due to the characteristic of an environment, and structural explanations identify the poverty as a product of the society in which it takes place.

3. Problem Formulation

The hypothesis of this study is:
1) The unemployment rate has a partially positive effect on the poverty level of districts/ cities in Bali Province.
2) The level of education has a partial negative effect on the poverty level of districts/ cities in Bali Province.
3) The level of economic growth has a partial negative effect on the poverty level of districts/ cities in Bali Province.
4) The unemployment rate, education level, and economic growth rate simultaneously affect the poverty level of districts/ cities in Bali Province.
4. Research Methodology

In this study using quantitative research methods. The reason for using this quantitative method is because the focus of this study is to test the predetermined hypothesis, namely that it is suspected that the variables of the unemployment rate, education level, and economic growth rate on the poverty level of districts/ cities in Bali Province are suspected. Associative research is a study that aims to determine the effect of the relationship between two or more variables. In accordance with this understanding, the research conducted by researchers was in an associative form. This study uses multiple regression analysis equipped with panel data test and classical assumption test in the form of normality test, multicollinearity test, heteroscedasticity test and autocorrelation test. The research location in this study is in the Province of Bali. Researchers took Bali Province as the research location because according to data from the Central Bureau of Statistics, there is an imbalance in the poverty level of districts/ cities in Bali Province. The data collection method used in this study is the documentation method, according to Sugiyono (2013) documentation is a record of events that have passed. Documents can be in the form of writings, pictures, or monumental works of a person. Documents in the form of writing, for example, diaries, life histories, biographies, regulations, policies. Documents in the form of images, for example photos, live pictures, sketches and others. In this study the data used are secondary data. Secondary data is data obtained through other parties, namely from the Central Statistics Agency (BPS) of Bali and Indonesia Provinces as well as various literatures related to this research. The data analysis technique used is multiple linear regression equipped with panel data analysis. Panel data regression models in general is $Y_{it} = \alpha + \beta_1X_{1it} + \beta_2X_{2it} + \beta_3X_{3it} + \epsilon_{it}$ where $Y$ represent the poverty levels, $X_1$ represent the unemployment rate, $X_2$ represent the education level, $X_3$ represent the economic growth rate, and $\beta_{(1..3)}$ represent the regression coefficient for each independent variable.

5. Analysis Result

Description of Research Data

Based on the research results, it is known that the highest unemployment rate in Bali Province in 2010 was in Denpasar City and the lowest was in Bangli Regency. Similar to 2010, in 2019 Denpasar City had the highest unemployment rate in Bali Province, amounting to 30.86 percent and the lowest unemployment rate in Bali Province in 2019 was in Bangli Regency, namely 2.78 percent. Given that the labor problem is very complex and continues to increase every year, the open unemployment rate in Bali Province in 2019 has increased. The government's role is very important in overcoming the problem of unemployment in Bali Province with various policies that have been launched, such as increasing the potential of unexplored areas. In addition to the role of the government, the private sector also has an important role in overcoming the problem of unemployment, namely by helping the government to build investment in areas where the potential has not been explored.

Based on the research results, it is known that the average length of schooling in Bali Province has increased. In 2010, the average length of schooling was 7.74 years and in 2019 the average length of schooling increased to 8.84 years. The province of Bali experienced an increase in the average length of schooling by 1.1, which means that the increase was considered low because it was within ten years. Karangasem Regency is the Regency with the lowest average length of schooling every year when compared to the Regency/ City in Bali Province. The average length of schooling for Karangasem Regency in 2019 is 6.31 years. It is inversely proportional to the city of Denpasar, which is the city with the largest average length of schooling each year, in 2019, which is 11.23 years. This is because Denpasar City is the capital of Bali Province so that access to facilities, as well as the quality of existing education is better than other districts in Bali Province.

Based on the research results, it is known that the growth of Denpasar City's gross regional domestic product is the highest when compared to other regencies in Bali Province. The main factor that causes the highest gross domestic product growth in Denpasar City because it is the capital of Bali Province and has the characteristics of the tourism sector which is in line with the movement of the tourism sector in Bali Province. The regencies around the city of Denpasar with a fairly good gross domestic product growth are Badung Regency and Gianyar Regency, the gross regional domestic product growth is 5.83 percent and 5.64 percent respectively. Meanwhile, the lowest gross regional domestic product growth was Klungkung Regency at 5.44 percent.

Based on the research results, it is known that the percentage of poor people per Regency / City from 2010 - 2019 has fluctuated. In 2012 to 2014 the percentage of poor people in Bali Province has increased every year, this is due to the
increase in fuel prices and an increase in the poverty line in 2013 to IDR 272,349 from IDR 249,997 in 2012 so that many people live below the poverty line.

**Descriptive Analysis**

Based on the test results, it can be explained that the number of observation points used is 90. The unemployment rate variable has a minimum value of 1.94 percent while the maximum value is 11.63 percent with an average of 5.2026 percent and a standard deviation of 1.83 percent. The education level variable has a minimum value of 4.55 years while the maximum value is 11.23 years with an average of 7.78 years and a standard deviation of 1.65 years. The economic growth rate variable has a minimum value of 4.57 percent while the maximum value is 7.64 percent with an average of 6.08 percent and a standard deviation of 0.59 percent. The poverty rate variable has a minimum value of 1.52 percent while the maximum value is 7.44 percent with an average of 4.84 percent and a standard deviation of 1.60 percent.

**Panel Data Regression Estimation Model Selection Test Results**

The results of the chow test show that the value of Prob. The Chi-square cross-section of 0.0000 is smaller than the alpha value (0.05), so the appropriate method in research and the best technique for conducting regression testing is to use a fixed effects model. The Hausman test results show that the value of Prob. The random cross-section of 0.0274 is smaller than the alpha value (0.05) so that the correct model for panel data regression is the fixed effect model. Because the Fixed Effect Model (FEM) model has been selected twice, the Langrange Multiplier (LM) test is not necessary, because the Fixed Effect Model (FEM) in this study is the best model to answer the research objectives.

**Panel Data Regression Analysis**

Based on the test results, it is known that the regression coefficient value of the unemployment variable (X1) and education (X2) in this study has a probability value of less than 0.05. This shows that the unemployment variable (X1) and education (X2) have a significant effect on the poverty level variable, while economic growth (X3) has a probability value of more than 0.05 so that economic growth has no effect on the poverty level.

**Result of Determination Coefficient Test (R²)**

The test results give results in which the R2 value is 0.938368. This means that 93.84 percent of the variation in the poverty level of districts / cities in Bali Province in 2010-2019 can be significantly influenced by unemployment (X1), education (X2) and economic growth (X3) while the remaining 6.16 percent is explained by other factors.

**Model Feasibility Test Results (F Test)**

The results of the F test (F test) show that the calculated F value of 107.9615> F table is 2.719 with a significance value of P value 0.000 which is smaller than α = 0.05, this means that the model used in this study is feasible. This result means that the three independent variables are able to predict or explain the phenomenon of poverty levels. This means that simultaneously unemployment (X1), education (X2) and economic growth (X3) have a significant effect on poverty levels.

**Hypothesis Test Results (t-test)**

1) The effect of unemployment on poverty levels

The results of the t test calculation in Table 4.17 show that the regression coefficient of X1 or unemployment is 0.215 with a t value of 4.291> t table, namely 1.662, is positive with a significance level of 0.000 <0.050. This shows that unemployment has a positive and significant effect on poverty levels, so the first hypothesis is accepted. This means that, if the unemployment rate variable increases by 1 percent while the other independent variables are constant, the poverty rate variable will increase by 0.215 percent.

2) The effect of education on poverty levels

The results of the t test calculation in Table 4.17 show that the regression coefficient of X2 or education is -0.400 with the t value of -3.411 < t table, namely -1.662, is negative with a significance level of 0.000 <0.050. This shows that education has a negative and significant effect on poverty levels, so the second hypothesis is accepted. This means, if the education variable has increased by 1 year while the other independent variables are constant, the poverty rate variable will decrease by 0.400 percent.

3) The effect of economic growth on poverty levels

The results of the t test calculation in Table 4.17 show that the regression coefficient value of X3 or economic growth is -0.016 with the t value of -0.149> t table which is -1.662 is negative with a significance level of 0.882 > 0.050. This shows that economic growth has no significant effect on poverty levels, so the third hypothesis is rejected.
**Independent Variables with Dominant Influence**

Based on the results of the Standardized Beta calculation, the absolute value of the Standardized Beta variable of the unemployment rate is greater than the other independent variables, namely the education level variable which has the Standardized Beta absolute value of -0.4120 and the economic growth rate variable of -0.005. So it can be concluded that the unemployment rate variable has a dominant effect on the poverty level of districts/cities in Bali Province.

Unemployment is a path to poverty and many factors cause unemployment, including the low level of education, so that people will be less competitive with migrant workers. In addition, the culture of rural communities who are still comfortable with their livelihoods as fishermen and farmers also makes poverty difficult to overcome. If unemployment in a country is very bad, then chaos will occur both in political and social terms and will have a bad effect on people's welfare and prospects for economic development in the long term Prastyo (2010), therefore the unemployment rate needs to be a consideration to overcome the problem of poverty.

**Implications of Research Results**

Poverty is still a problem for developed and developing countries as well as Indonesia. Bali Province is one of the famous tourist attractions that is often visited by foreign and domestic tourists, however, Bali Province still leaves social problems such as poverty. Many factors can affect poverty levels, such as unemployment, education, and economic growth.

The focus of this research is the effect of unemployment rate, education level, and economic growth rate on poverty level in regencies/cities in Bali Province. The results of this study indicate that the unemployment rate has a positive effect on the poverty level of districts/cities in Bali Province. This happens because unemployment has an impact on reducing people's income, so that it will reduce the level of welfare they achieve. An unemployed person has no income or income from his job. The many and varied needs of the community make them have to try to be able to meet their daily needs, one of the ways that people can do is work. If they do not work or are unemployed, they cannot fulfill their daily needs properly and cause people to reduce their consumption expenditure. When their needs are not met, the impact is they will fall into the category of poor people. Based on the research results, the unemployment rate has a positive effect on the poverty level of districts/cities in Bali Province, this means that the higher the unemployment rate, the higher the poverty level, and vice versa. These results indicate that if the unemployment rate increases, productivity will decrease so that people will find it difficult to meet their daily needs, the more unmet needs for life will increase the level of poverty. When people are unemployed, the bad impact is a decrease in the standard of living and the inability to meet the daily needs of the household, which has implications for poverty in Muhammad and David (2019). Little bit wrong if we are trust the people those who don’t have a job are poor, the people maybe unemployed by definition but they may not be bad at making ends meet Amassoma et.al (2013). The result of this study are in line with the result of research conducted by Omojolaibi & Omojolaibi (2014), Muhammad & David (2019), and Samuelson & Nordhaus (2004) that unemployment rate has a positive and significant effect on the poverty rate. Government intervention is very important in overcoming the problem of unemployment, as stated by Keynes in his theory which advocates for government intervention in maintaining the level of aggregate demand so that the tourism sector can create jobs. Apart from that, government intervention in reducing the unemployment rate can also be in the form of providing training in accordance with the skills required in the labor market. So that the existing human resources are ready for the world of work.

Likewise, education has a negative and significant impact on the poverty level of districts/cities in Bali Province. Higher education will save people from poverty, higher education will increase the country's ability to absorb and develop technology which will later be able to help reduce poverty levels. Higher education is also able to improve skills and increase one's productivity. Education as measured by the average length of schooling has a negative and significant effect on poverty levels, this means that the higher the successful year a person completes, the more prosperous they will be so that the poverty rate will be lower. The results of this study are in line with the results of research conducted by Nurdyana (2012), Egunjobi & Adenike (2014), and Mehmood & Sadiq (2010) that education has a negative and significant effect on the poverty rate at the 1 percent level. The magnitude of the Marginal Effect of the level of education in reducing the poverty rate in North Maluku Province is 0.90 percent. Thus, an increase in one year of school age for a household head would be able to reduce the poverty rate by 0.90 percent. Education can increase the potential of society even though education does not directly make a person rich. However, the increased potential they have can make the community more developed and sell their potential to survive and escape poverty.

Each regency/city in Bali Province has a different level of economic growth, this happens because each region has a different economy. Economic differences in each region can affect economic activity, which will gradually cause problems for economic growth and increase poverty. Based on the research results, economic growth is proven to have no effect on the poverty level of districts/cities in Bali Province. This negative but insignificant effect is due to the district/municipal economic growth rate in Bali Province which fluctuates erratically as can be seen in Table 4.4, where this causes the
reduction in the unemployment rate to be carried out not optimally so that it causes the control of the poverty level to be supported by consumption, not investment or capital. The economic growth that does not have a significant effect reflects the lack of quality of existing economic growth because it is still unable to reduce poverty levels. In line with the research of Cunliffe et al (2013) which saw strong economic growth but mediocre poverty reduction performance, on the other hand, the poverty alleviation by UMBR was above average but the performance of economic growth was mediocre. According to Marinko and Romina (2016) growth is good for alleviating poverty but that alone is not enough, the extent to which growth reduces poverty depends on how we measure poverty, and on the absorption of the poor, speed, and growth patterns.

6. Conclusion and Recommendations

Based on the results of the discussion, it can be concluded that the unemployment rate, education level, and economic growth rate have a (significant) effect simultaneously on the poverty level of districts/cities in Bali Province. The unemployment rate has a positive (significant) effect on the poverty level of districts/cities in Bali Province. The level of education has a negative (significant) effect on the poverty level of districts/cities in Bali Province. The level of economic growth does not have a negative effect on the poverty level of districts/cities in Bali Province, but it is not significant.

Several recommendations can be given in the form of suggestions that can be taken into consideration based on the conclusion that expansion of employment is very necessary to reduce the unemployment rate the government need to maximize programs that can maximize the quality of human resources either through providing training in the skills demanded in the labor market. The government of Bali Province should improve and re-evaluate programs to increase the level of education. Other than that free educational facilities and scholarships provided by the government should also focus on orphans and underprivileged people in various districts/cities in Bali Province so that with the even distribution of education obtained, the poverty rate will also decrease.

7. References


