Study on the Impact of Economic Growth, Unemployment, and Education on South Kalimantan Province's Poverty Level from 2014 to 2020

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ABSTRACT

This research aims to examine the impact of economic growth, unemployment, and education on poverty. Poverty is still a major issue in Indonesia's growth, and it is not evenly distributed. On the other hand, a structured good living due to the accomplishment of communal welfare will cause the degree of poverty to be reduced. As a result, to determine economic growth, unemployment, and education levels in the districts/cities of South Kalimantan, this research used the analysis method of panel data regression covering 13 districts/cities in South Kalimantan during seven years utilizing the Eviews9 software. The data were gathered from the South Kalimantan Central Statistics Agency. According to the study's findings, the economic growth rate had a significant and positive impact on poverty, although education and unemployment had little effect.

Keywords: Poverty, economic growth, unemployment, panel data analysis.

1. INTRODUCTION

Indonesia is one of the developing countries struggling with a critical development issue, i.e., poverty. The occurrence of poverty has affected the economy. Likewise, a lack of human resources due to a lack of education is a contributing element to the formation of poverty and has yet to be resolved and completed. Specifically, poverty alleviation is a program that the South Kalimantan local government must emphasize to reduce the poverty rate. According to [1], the number of impoverished people continued to rise; if no policies are implemented to address the government's difficulty, it will be impossible to overcome poverty. In addition, economic development is described as poverty reduction, which is a long-term challenge to make changes to increase the welfare and prosperity of the society. According to [2], a country's economic growth has a single aim, which is to improve the wellbeing of the society, as a form of government’s effort to accomplish the developmental aims.

According to [3], poverty is a multidimensional development issue. Poverty is also a complex matter with several aspects, including social, economic, cultural, political, spatial, and temporal dimensions. Poverty, according to [4], is a complicated problem in a nation since it is linked to not only low levels of income and consumption but also low levels of education, health, and the poor's inability to engage in the development process.

To assist development and economic progress, the economic potential in each district must be explored and utilized effectively and efficiently [5]. In fact, the development process is not just focused on economic growth, but population growth is also a fundamental problem. If population growth is not regulated, economic development objectives, namely people's welfare, will not be reached, resulting in a rise in poverty. Moreover, the relationship between poverty and education is quite strong because education provides knowledge and adds insight to a decent life.

According to [1], one of the most important indicators of a region's economic development success is economic growth. With a high GRDP, it is possible to alter a place for the better and positively influence poverty issues. However, even with a high GRDP, not all people of a particular region may be assured of their wellbeing. The GRDP only summarizes the community's overall welfare needs.
According to [6], another factor that affects the level of poverty is unemployment, where one of the variables that define a citizen's prosperity is the level of income. On the other side, the relationship between education and poverty has long been a major concern in many developed and developing nations. Even in developed countries like the United States, difficulties emerge due to huge subsidies aimed at the poor. Meanwhile, in Indonesia, the issue is the disparity in access to education between the wealthy and the poor. The schooling costs for wealthy and poor people are about the same regardless of their family's economic situation [7].

**Figure 1**: Indonesia's poverty rate from 2014 to 2020 (per million people)

![Poverty Rate Chart](chart.png)

**Source**: Central Bureau of Statistics Republic of Indonesia

Figure 1 indicates that Indonesia's number of impoverished people was never constant from March 2014 to 2021, with a rise and a decline. It reached 28.28 million people in March 2014. In 2015, there was a 0.31 million rise in the number of impoverished individuals, bringing the total to 28.59 million. It fell every year after 2015 until 2019. It was 28.01 million in 2016, 27.77 million in 2017, 25.95 million in 2018, and 25.14 million in 2019. In 2020, the number of poor people increased by 26.42 million, and in 2021, the number of poor people increased by 11.2 million. In March 2021, Indonesia's number of impoverished people reached 27.54 million.

According to the percentage, the poverty rate was higher in March 2014 than in 2015, 11.2 percent. In 2015, the poverty rate in Indonesia was 11.22 percent higher than in previous years. In 2016, it was 10.86 percent; in 2017, it was 10.64 percent; in 2018, it was 9.82 percent; and in 2019, it was 9.41 percent. In addition, according to [8], the contributing factors of poverty reduction were an increase in the average real wage of labor, a farmer's exchange rate index that was above 100, a decrease in the open unemployment rate, relatively low inflation, a decline in commodity prices, program implementation (Rasta), and an increase in average per capita expenditure. In 2020, the poverty rate was 9.78 percent, with a 0.36 percent increase to 10.14 percent in 2021. Poverty increased as a result of the COVID-19 pandemic and other reasons.

In this case, government initiatives to alleviate poverty are critical because they involve the interests of the community's wellbeing. The increase in Indonesia's poverty rate in 2021 cannot be separated from the government's efforts to combat poverty, which seems to be ongoing. It is the obligation of the government to find a solution to poverty alleviation measures as soon as possible. As a result, as a supporting process for improving society's lives, the problem of poverty is a common duty. Also, the significance of understanding the variables that contribute to poverty is needed.

2. LITERATURE REVIEW

2.1. Poverty Definition

Underprivileged nations continue to face the issue of growth and unequal income distribution, whereas many developing countries have rapid economic expansion but fail to help the poor [9]. According to [10], poverty is when the people or a portion of the population can only fulfill the necessities of life, such as food, clothes, and shelter. In this case, poverty is caused by a variety of factors. These factors are attributable to economic limitations, either in regular or basic needs. According to [11], the problem of poverty has existed across various countries since its elimination, along with hunger and alleviating poverty, remains a challenge. Poverty may be defined as a lack of material resources, a lack of social needs, a lack of income, a lack of access to certain resources, and other factors. The variety of hypotheses that have been created demonstrates the many points of view among observers of the poverty problem [12].

As a result, the key components for effective economic growth are sufficiency and freedom, which are the objectives of any community [13]. According to [14], the percentage of the population below the poverty line, the average size of the spending gap, and a metric that illustrates expenditure among the poor may all be used to calculate poverty. In Indonesia, the Central Bureau of Statistics employs the basic needs approach in assessing poverty. A person's incapacity to satisfy fundamental necessities, including food and non-food, is assessed economically. As a result, someone is defined as poor if their expenditures fall below the poverty threshold. The following describes the level of poverty, the factors that influence it, and the relationship with the poverty circle:
Figure 2: Correlation of the poverty level of education, economic growth, unemployment and poverty circle

Source: [15]

According to [13], poverty is divided into two categories: relative poverty, which is seen from the perspective of social inequality in which people can meet their basic needs but still live in poverty; and absolute poverty, which is seen from the perspective of people who are hardly able to obtain resources and live in poverty threshold. Moreover, poverty contains three broad perspectives: approaches to employment, basic needs, and approaches to ability. Income metrics are then used to assess poverty in basic needs approaches, while welfare is understood as an extension of human capacity in the approach to income [16].

2.2 Economic Growth's Impact on Poverty

According to [17], there are numerous approaches to assess economic growth, from both the demand and supply sides. From the demand side, it considers macroeconomic components, such as consumption, investment, exports, and imports. From the supply side, it takes into account the added value of each sector in national output. According to [3], economic growth is one of the measures used to assess economic performance at the national and regional (regional) levels.

According to [18], the government constantly demands economic growth to thrive and eradicate poverty, but strong economic growth is meaningless to the impoverished. An economy is considered growing if the amount of goods and services produced in a given year exceeds the previous year's amount. The following metrics are used to determine the rate of economic growth: GDP (Gross Domestic Product) growth rate, GNP (Gross National Product) growth rate, investment, capital goods, human resources (labor), natural resources, technology, management, entrepreneurship, efficiency, information, and population increase, which are all factors influencing the pace of economic growth [19].

2.3 Unemployment’s Impact on Poverty

According to [20], unemployment is those who are seeking work, those who are starting a company, or those who are not looking for work because they believe it is difficult to get work. The Sakernas (national survey on labor force) defines open unemployment as:

1. those who are not working and are seeking a job
2. those who do not labor and do not plan for business
3. they do not work and do not seek employment because they believe it is difficult to find work
4. those who do not work and are not seeking a job because they have been hired but have not yet begun work

According to [21], the number of jobless people determines the country's level of life. If a country allows employees to be jobless, the GDP will rise because many jobless employees will be a huge issue in a country that produces poverty. An opinion [22] stated that unemployment is a macroeconomic problem that causes a reduction in living conditions and psychological stresses. Unemployment is also an important issue for a country because it involves employment and welfare opportunities [21]. Besides, there is a close relationship between the extent of poverty and high levels of unemployment.

2.4 Education’s Impact on Poverty

Education is an etymological term for the process of developing one's talents and individual capabilities. According to [23], the term education in Indonesian is derived from the word "pendidikan" by combining the suffixes "pe" and "an" (in the Indonesian language), which signify a stage, a method, or an act of educating. According to [24], the purpose of education is divided into several types: first, national education is the goal of education to be achieved by a nation; second, institutional goals are educational goals to be achieved by an educational institution; third, curricular goals are goals to be achieved by a specific subject; fourth, instructional objectives are educational goals to be achieved by a specific subject or sub-subject.

According to [25], if there is a negative and substantial influence on poverty, increasing education will impact. Education is a means of increasing productivity to increase income. Since education is an investment in human capital, in the end, education can break the poverty chain, realizing the quality of life and welfare of a better society.
3. RESEARCH METHOD

The panel data method was used to examine this study. Panel data is a mix of cross-section data and time-series data. This research included observations from 13 regencies/cities in South Kalimantan on economic growth, education, and unemployment from 2014 to 2020. This study utilized EViews 9 and Microsoft Excel. This study also employed an analysis tool of panel data regression together with an econometric model (estimator) based on the model [26], as follows:

\[
POV_{it} = \beta_0 + \beta_1 GROWTH_{it} + \beta_2 EDUC_{it} + \beta_3 PNGG_{it} + \epsilon_{it}
\]

Description:
- \(POV\) = Poverty
- \(GROWTH\) = Economic growth
- \(EDUC\) = Education
- \(PNGG\) = Unemployment
- \(\beta_0\) = Constant
- \(\beta_1 \ldots \beta_3\) = The coefficient of independent variable regression
- \(\epsilon\) = Error term (error factor)
- \(i\) = Number of observation \(i\)
- \(t\) = Number of year \(t\)

Table 1 summarizes the estimation findings of the econometric model and its complementary testing.

**Table 1**
Panel Data Regression Econometric Model Estimation Results - Cross Section

<table>
<thead>
<tr>
<th>Variable</th>
<th>PLS</th>
<th>FEM</th>
<th>REM</th>
</tr>
</thead>
<tbody>
<tr>
<td>(C)</td>
<td>3.585446</td>
<td>5.122856</td>
<td>5.154701</td>
</tr>
<tr>
<td>(GROWTH)</td>
<td>0.061769</td>
<td>0.060671</td>
<td>0.059763</td>
</tr>
<tr>
<td>(EDUC)</td>
<td>0.019105</td>
<td>-0.010848</td>
<td>0.010061</td>
</tr>
<tr>
<td>(PNGG)</td>
<td>-0.094460</td>
<td>0.095779</td>
<td>0.076502</td>
</tr>
</tbody>
</table>

Adjusted \(R^2\) | 0.037962 | 0.885382 | 0.167079 |
Statistic \(F\) | 1.999644 | 40.13821 | 6.08178 |
Statistical Probability | 0.121536 | 0.000000 | 0.00099 |
\(F\) | 41         |

Model Selection Test
(1) Chow
Cross-section \(F\) (12.61) = 45.976792; Prob. \(F\) (12.61) = 0.0000
(2) Hausman
Cross section random \(X^2(3) = 4.116842; Prob. X^2(3) = 0.2491\)

**Source:** Secondary data, EViews.

Table 1 shows that the p-value (probability) or empirical statistical significance of \(X^2\) was 0.2491 (> 0.10), indicating that \(H_0\) was accepted. Finally, the random-effects model (REM) was the calculated model. The random-effects model (REM) was chosen as the best-approximated model based on the Chow and Hausman tests. Table 2 displays the entire estimation results of the random-effects model (REM).

**Table 2**
Estimation Model for the Random Effect Model (REM)

\[
POV_{it} = 5.154701 + 0.059763 GROWTH_{it} - 0.010061 EDUC_{it} + 0.076502 PNGG_{it}
\]

\(R^2 = 0.167079; DW = 1.215996; F = 6.081714; Prob. F = 0.000941\)

**Source:** Secondary data, EViews.

Description: 'Significant at \(\alpha = 0.01\); **Significant at \(\alpha = 0.05\); ***Significant at \(\alpha = 0.10\). The number in brackets is the \(r\) statistic's probability value.

Table 2 depicts that the p-value (probability) or the empirical statistical significance of \(F\) was 0.000941 (0.01); hence, \(H_0\) was rejected. Moreover, the coefficient of determination \(R^2\) represents the calculated model's predictability. Table 2 also shows that the \(R^2\) value was 0.167079, indicating that 16.70% of the variation in the poverty absorption could be explained by variables of regency/city economic growth, education, and unemployment. Meanwhile, the remaining 83.30% were impacted by variables or factors not included in the model.

4. DISCUSSION

According to the research findings above, poverty was only 16.70% impacted by economic growth, education, and unemployment. On the other hand, 83.30% of the analysis outcomes were impacted by other variables or factors not included in the model. Based on this study's data analysis and hypothesis testing, with a regression coefficient of 0.059763, the influence of economic growth on poverty rates in 13 districts of South Kalimantan from 2014 to 2020 was positive and significant. Economic growth had a probability of 0.0015 in this study, where the value was less than \(\alpha = 0.05\), implying that economic growth positively influenced poverty in South Kalimantan. In addition, there is an economic growth phenomenon in which the increase in GNP per capita due to strong economic growth equals more employment, higher income levels, and greater taxes, allowing the government to do something for the poor. This research is supported by previous studies [19], [27], [28], and [29], which demonstrated that varied economic growth had a considerable beneficial influence on poverty. However, this study contradicts the findings [25], [30], and [3], which claimed that economic growth had little effect on poverty.
However, according to the findings, there was no statistical association between the unemployment regression coefficient of 0.076502 and poverty. In this study, unemployment had a probability of 0.0688, with a larger value than $\alpha = 0.01$, indicating that unemployment did not influence poverty in South Kalimantan. As a result, no matter how great the changes in the unemployment variable are, they will not have a major impact on poverty. The number of persons whose income is at or below the minimum threshold might represent the magnitude of poverty because there is a historical link between poverty and high unemployment rates. This study is supported by past research [3] and [1], which suggested that the unemployment variable did not influence poverty. Nevertheless, this study contradicts the findings [27] and [15], claiming that unemployment impacted poverty.

In this study, hypothesis testing was also performed, and the results showed no relationship between education and poverty, with a regression coefficient of 0.010061. Education had a probability of 0.2150 in this study, where the value was more than $\alpha = 0.01$; hence, education did not influence poverty in South Kalimantan. This situation demonstrates that human resources are still very limited, and the level of skills and knowledge is still quite low owing to inadequate educational facilities. Consequently, they have not had a good life. If a nation's education is poor, the nation will be devastated since education forms a nation's human character. Many impoverished individuals suffer from ignorance if education is the primary objective. This finding is supported by several studies [25], [3], [1], and [4], suggesting that the education variable did not influence poverty. This study, however, contradicts the findings [30], [7], and [31], which claimed that poverty had a major impact on poverty.

5. RESEARCH CONTRIBUTION

The findings of this study are likely to contribute in the following ways:

- For academics, this research can give knowledge and suggestions for achieving community welfare to organize a good living to minimize poverty.

6. CONCLUSION

This study aimed to examine the impact of economic growth, unemployment, and education on poverty because prior studies had inconsistencies, which the researchers proved. Based on the findings of a 7-year combined analysis of cross-sectional data and time-series data or panel data in 13 districts of South Kalimantan from 2014 to 2020, the Random-Effects Model (REM) estimate model was chosen. Based on the research findings, it is concluded that:

1. The economic growth rate had a significant and positive impact on poverty. Economic growth resulting from strong economic growth means more employment, greater income levels, and more taxes that allow the government to do something for the impoverished.

2. Poverty was unaffected by unemployment. Unemployment will not have a substantial impact on poverty. The number of persons whose income is at or below the minimum threshold might represent the degree of poverty.

3. The varying education did not influence poverty. If a nation's education is poor, the nation will be destroyed since education forms a nation's human character. If education becomes the main concern, a lack of intelligence will be common among poor people.

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