THE INFLUENCE OF GROSS REGIONAL DOMESTIC PRODUCT ON POVERTY IN INDONESIA

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ABSTRACT

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The main goal of economic development is no longer focused on aspects of high economic growth but on overcoming poverty with a continuously developing economy. This study aims to analyze the Gross Regional Domestic Product of the primary, secondary, and tertiary sectors on poverty in Indonesia from 2010 - 2020. The research method used is panel data multiple linear regression analysis. The results showed that the primary industry and the secondary sector had a significant adverse effect on poverty in Indonesia. In contrast, the tertiary sector had no impact on the poverty rate in Indonesia. This research implies that the central and regional governments need to increase capital allocation in the primary sector by improving supporting infrastructure that can increase people's income to reduce poverty. In carrying out development in the secondary sector, the government needs to open new economic areas oriented towards labor-intensive industries to reduce poverty. In overcoming the problem of poverty, it is necessary to have the government's role in improving the quality of human resources, such as improving education and health facilities, as well as a technological renewal that all levels of society can feel.

Keywords:
PDRB, Sektor Primer, Sektor Sekunder, Sektor Tersier, Kemiskinan

ABSTRAK

1. INTRODUCTION

Economic development is a long-term process that results in a rise in the real per capita income of a country's population and an improvement in the institutional structure (Arsyad, 2010). The success of a country's economic development is indicated by three central values: developing society's capacity to meet their basic needs, increasing awareness of society's value as human beings, and increasing the ability to choose, which is one of the fundamental human rights (Todaro & Smith, 2006).

Economic development was redefined in the early 1970s, and a new perspective arose. The primary aim of economic development is no longer high economic growth but rather how to alleviate poverty, distribute money, and give employment opportunities in a developing economy. This is backed by economists' belief that growth described by a rise in the yearly gross national product cannot be a solution to this problem (Arsyad, 2010).

Poverty has been seen as a barrier to economic progress. Because Indonesia is a developing country with a lower middle class, it cannot be divorced from the issue of poverty. Poverty is defined as the inability of individuals or families to satisfy the bare necessities of life. Furthermore, poverty is created by government policies connected to development concerns that are insufficient or not in line with community ability, resulting in specific individuals not benefiting from the subsequent development process (Arsyad, 2010).

The percentage of poor individuals, also known as the Head Count Index (HCI-P0), is the proportion of the population living below the poverty line. The headcount index is used to calculate the proportion or percentage of the people that are classed as impoverished. A high ratio indicates that the proportion of poor households in an area is similarly high (Central Bureau of Statistics, 2021). The following graph depicts the proportion of impoverished individuals in Indonesia.

![Graph showing the percentage of impoverished individuals in Indonesia from 2015 to 2020.](source: Badan Pusat Statistik, 2021)

**Figure 1. Indonesian Poor Population Percentage Based on Semester**

According to the graph above, the percentage of impoverished people in Indonesia decreased significantly between March 2015 and September 2019, approaching one digit. This demonstrates that economic growth may be effectively achieved as an attempt to
alleviate poverty through government-launched initiatives aimed at raising the standard of living and overall welfare of the community. The Family Hope Program (PKH) is one of them, and it seeks to break the cycle of poverty among the poorest people. However, the poverty rate has risen by two digits in 2020 due to the Covid-19 epidemic, which has lowered productivity in all corporate sectors.

According to Ginantie (2016), agriculture sector expansion has been shown to lower poverty rates. This is due to the agriculture and commercial industries being the primary sectors capable of absorbing workers in East Java. As a result, when the primary industry grows, the agricultural community's standard of living and welfare will improve, as will the community's revenue. This viewpoint contradicts the findings of Nadhifa's (2018) study, which found that the agricultural sector has a considerable positive influence on poverty, i.e., if the agricultural industry grows by 1%, the poverty rate grows by 0.48 percent. This is because issues continue to occur in the agriculture sector. One is connected to the rising narrowing of agricultural land, which is produced by the extensive conversion of agricultural land functions, low product selling prices, restricted production factors, and other issues.

Meanwhile, Paran et al. (2019) discovered that the primary sector had little influence on poverty. This industry has low-average technology, and most of the population is engaged in agriculture, impacting the demand for highly skilled labor. Furthermore, this is not the only industry causing poverty. Silastri's (2017) empirical research Poverty is significantly affected by Gross Regional Domestic Product. This demonstrates that the greater the value of the Gross Regional Domestic Product, the greater the total demand and spending to promote public consumption owing to increasing community wealth. As a result, it will improve society's well-being and alleviate poverty.

This viewpoint contradicts the findings of Nadhifa (2018), who found that the industrial sector had little influence on poverty. This is because the industrial sector has labor qualification norms that make it difficult for people experiencing poverty to enter the industry, particularly in the education and skills sector, and only specific groups of people may profit from the industrial increase. As a result, the development of the industrial sector cannot substantially impact poverty alleviation. According to Paran et al. (2019), the secondary sector does not affect poverty, so the area cannot overcome poverty problems because the government has not been able to develop the site by creating new jobs, and private investment cannot accelerate economic growth.

Suripto and Subayil's (2020) empirical analysis reveals that economic progress has a considerable detrimental impact on poverty. Income distribution will occur to eliminate poverty when economic growth in potential industries increases. This is consistent with the findings of Wibowo et al. (2021), who found that economic expansion has a direct negative influence on poverty. This is related to increased welfare via purchasing power or the capacity to consume people to promote economic growth that can eliminate poverty.

This viewpoint contradicts the findings of Yuniati and Suryati (2018), who suggest that the Gross Regional Domestic Product benefits the poverty rate in West Nusa Tenggara Province, which is 10.7 percent, while other variables influence the remainder. This is due to the inequitable distribution of the benefits of GDP development in West Nusa Tenggara Province's regions. Calculation of Gross Regional Domestic Product as a measure for determining a region's economic situation. If the growth rate is positive, it indicates that
economic development was favorable during that period and has a long-term beneficial influence on economic development. It is envisaged that enhanced economic growth will boost the potential for poverty reduction.

Based on the description above, the purpose of this study is to 1) examine the impact of primary sector GRDP on poverty rates in Indonesia; 2) examine the impact of secondary sector GRDP on poverty levels in Indonesia; and 3) examine the impact of tertiary sector GRDP on poverty rates in Indonesia.

2. METHODOLOGY

This form of study is known as quantitative research. Quantitative research is a method of examining data in the form of numbers as a result of its discoveries. The population consists of 34 provinces in Indonesia, with a study sample of 33 provinces representing provinces in Indonesia and observational data from 2010 to 2020. There were data restrictions because the province of North Kalimantan was divided in 2012. Therefore this province was not included in the study. The poverty rate (Y) is the dependent variable in this study, and the independent variables are the primary sector (X1), secondary sector (X2), and tertiary sector (X3).

In this study, the operational definition is as follows:

a. Poverty is the inability to achieve basic requirements such as food, clothes, housing, education, and health in percentage units.

b. The Primary Sector is the expansion of agricultural and mining activities that result in a growth in products and services generated in society, measured in rupiah units.

c. The Secondary Sector is the expansion of manufacturing operations, and purchase of power, gas, water, and construction, which results in a rise in commodities and services produced in society, expressed in rupiah units.

d. The Tertiary Sector is the expansion of operations from wholesale trade, transportation, lodging, information communication, financial services, and other services that result in a growth in products and services generated in society, expressed in rupiah units.

This study employs panel data regression analysis with the equation:

\[ Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \epsilon_{it} \]  

Where:

- Y = Poverty Level
- X1 = Primary Sector
- X2 = Secondary Sector
- X3 = Tertiary Sector
- \( \beta_0 \) = Intercept
- \( \beta_{1-3} \) = Independent Variable Coefficient
- i = Cross section
- t = Time series
- \( \epsilon \) = Random Error

Three models may be employed in panel data regression: the Common Effect Model, the Fixed Effect Model, and the Random Effect Model. However, the Chow, Hausman, and Lagrange multiplier tests can be used to select the optimal model. Furthermore, the best
regression output must pass the classical assumption test, which includes multicollinearity, heteroscedasticity, and autocorrelation normalcy checks (Gujarati & Porter, 2012).

3. RESULTS AND DISCUSSION

There are three models in the panel data test to examine the impact of GRDP of the primary, secondary, and tertiary sectors on the poverty rate, including the Common Effect Model, Fixed Effect Model, and Random Effect Model. Model selection is used to choose the best from the three estimating models available via the Chow, Hausman, and Lagrange multiplier tests. Based on the estimation results, the fixed effects model is the most appropriate for analyzing the influence of the primary, secondary, and tertiary sectors on the poverty rate. Furthermore, the output fixed effects model passed the classical assumption test, including multicollinearity, heteroscedasticity, and autocorrelation tests. Table 1 summarizes the estimation findings from this study.

Table 1. Fixed Effect Model

<table>
<thead>
<tr>
<th>No</th>
<th>Variable</th>
<th>Coefficient</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Primary Sector</td>
<td>-0.057267</td>
<td>-4.907204</td>
<td>0.0000</td>
</tr>
<tr>
<td>2</td>
<td>Secondary Sector</td>
<td>-0.013836</td>
<td>-2.925141</td>
<td>0.0037</td>
</tr>
<tr>
<td>3</td>
<td>Tertiary Sector</td>
<td>0.002790</td>
<td>1.089928</td>
<td>0.2765</td>
</tr>
</tbody>
</table>

Adjusted R-squared 0.952860
F hitung Sebesar 210,0629
T table 1,966594

Source: Eviews 9, 2022

3.1. The Impact of Primary Sector GDP on Poverty Levels in Indonesia.

From 2010 to 2020, the primary sector significantly negatively impacts poverty in Indonesia. This is due to one of Indonesia's areas, Kalimantan, being able to make a substantial contribution to poverty reduction through the mining and quarrying sector. This research illustrates how the primary sector may break the cycle of poverty hypothesis because individuals who work in this sector make money, which allows them to accumulate more capital and break free from the cycle of poverty.

According to Ginantie's (2016) empirical analysis, agricultural sector expansion has effectively lowered poverty rates in East Java. This is because the agricultural and trade sectors are the dominant sectors capable of absorbing labor in East Java. As the primary sector grows, the agricultural community's standard of living and welfare will improve in tandem with the increased income received.

The research is consistent with Silastri's (2017) finding that GDP has an enormous negative impact on poverty in Kuantan Singingi Regency. This demonstrates that as the value of the Gross Regional Domestic Product rises, so will expenditure and aggregate demand, resulting in increased public consumption due to the increased money received by the community. As a result, it will benefit the people and alleviate poverty in Kuantan Singingi Regency.

3.2. The Impact of Secondary Sector GDP on Poverty Levels in Indonesia.

In Indonesia, the secondary sector significantly negatively impacts poverty from 2010 to 2020. This is because, while not dominant, investment in Indonesia's labor-intensive processing industry can potentially reduce poverty. This conclusion demonstrates how the secondary sector might break the cycle of poverty hypothesis from the income side. According
to Suripto and Subayil's (2020) empirical study, economic expansion negatively impacts poverty in Yogyakarta. Increased economic growth through prospective sectors will result in income distribution, lowering poverty levels. This conclusion is consistent with the findings of Wibowo et al. (2021), who found that economic expansion directly impacted poverty in East Kalimantan. This is related to increased welfare due to increased purchasing power or the capacity to consume people, allowing for economic development and reduced poverty levels.

3.3. The Impact of Tertiary Sector GDP on Poverty Levels in Indonesia.

The tertiary sector did not affect poverty in Indonesia in 2010 – 2020. This is because people with low levels of knowledge tend to be poor, resulting in a low level of technological advancement and little impact on reducing poverty in this industry. According to this research, the tertiary sector has been unable to break the cycle of poverty theory, so the poor are still trapped in the cycle of poverty.

The poverty rate in West Nusa Tenggara Province is unaffected by the gross regional domestic product, according to Mersiana's empirical study from 2020. This is because not all groups can profit equally from the West Nusa Tenggara Province's superior Gross Regional Domestic Product, making it impossible to significantly reduce the number of the poor without further growth that helps the underprivileged. Without an equitable distribution of money, the gross regional domestic product cannot eliminate poverty.

That finding is consistent with Sinaga's (2020) research, which found that per capita Gross Regional Domestic Product did not influence poverty in Batu Bara Regency and Medan City. This is because the wealth disparity between inhabitants remains relatively small and uneven. As a result, a high per capita Gross Regional Domestic Product cannot significantly contribute to poverty reduction. Batu Bara District and Medan City have the greatest per capita Gross Regional Domestic Product in North Sumatra while still having a relatively high poverty rate.

4. CONCLUSIONS

Based on the study's findings, it can be stated that the primary and secondary sectors had a significant negative impact on poverty in Indonesia between 2010 and 2020. Meanwhile, the tertiary sector has little influence on the poverty rate in Indonesia from 2010 to 2020. Based on the findings and conclusions of the analysis, the implications of this research are as follows: 1) the central and regional governments must increase capital allocation in the primary sector by improving supporting infrastructure for the continuity of the production process so that the amount of output produced can be maximized, such as the distribution of infrastructure agriculture and the provision of free fertilizers, to increase people's income and reduce poverty levels; 2) the central and regional governments must increase capital allocation in the primary sector by improving supporting infrastructure for the continuity of the production process so that the amount of output produced can be maximized.

5. REFERENCES


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