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The Effect of Gross Regional Domestic Product (GRDP) and Labor Force Participation Rate (TPAK) on the Welfare of the Community of East Kutai Regency With Income Level As A Mediator

Ita Ika Luciana [1*], Aji Sofyan Effendi [2], Muhammad Awaluddin [3]
[1-3] Mulawarman University, Indonesia

Address: Kuaro Street, Samarinda City
Correspondensing author: Ikaluciana82@gmail.com*

Abstract*. This study aims to analyze the influence of GRDP (Gross Regional Domestic Product) and Labor Force Participation Rate (LFPR) on the welfare of the people in East Kautai Regency, with income level as a mediating variable. The identified variables in this research include the level of community welfare, proxied by the Human Development Index (HDI) (Y2) as the dependent variable, while GRDP (X1) and Labor Force Participation Rate (LFPR) (X2) are independent variables, and income level (Y1) serves as a mediating variable. This study utilizes panel data from 2012 to 2022, using Partial Least Square (PLS) analysis.*

Keywords*: GRDP, LFPR, Income Level, Community Welfare (HDI), East Kutai.*

1. INTRODUCTION

Kutai Timur Regency, located in the province of East Kalimantan, Indonesia, has experienced significant economic growth over the past few years. As a region rich in natural resources, especially coal and palm oil mining, Kutai Timur has become one of the main contributors to regional economic growth. Economic development and community welfare are closely related, and a deep understanding of the factors that influence welfare is crucial in regional economic planning. Then Gross Regional Domestic Product (GRDP) becomes an interesting variable in measuring how feasible an economy is in a region.

Gross Regional Domestic Product (GRDP) is an economic indicator that records the total value of final goods and services produced in a region during a certain period of time. GRDP provides an overview of the size and growth of the economy, determines the structure of economic sectors, and is the basis for formulating economic policies. The calculation of GRDP involves the gross value added of all economic sectors, at current or fixed prices. In addition to providing information on economic health, GRDP allows comparison of welfare levels between regions or countries, and its sectoral analysis provides insight into the relative contribution of sectors to the economy, helping to plan development and economic policies more effectively.

Although there is economic growth, this phenomenon does not necessarily automatically create equitable social welfare. Therefore, it is important to identify whether there is a direct relationship between GRDP and the level of social welfare in East Kutai. This

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study specifically focuses on the significant role of income levels as a potential mediator. Thus, a deep understanding of this relationship is expected to provide valuable insights in formulating inclusive economic development policies in East Kutai, where economic growth is not only reflected in GRDP figures, but also felt by all levels of society.

The GRDP that is the focus of this study details four key sectors that were selected based on careful consideration. These four sectors, namely GRDP mining and excavation sector, GRDP agriculture/plantation sector, GRDP processing industry sector, and GRDP services sector, were deliberately chosen to reflect significant variations in the economic structure of East Kutai. GRDP mining sector reflects the dominant extractive sector in the regional economy, while food covers vital aspects of agriculture and food security. On the other hand, GRDP services sector reflects the contribution of the service and commercial sectors to economic activities. Analysis of these sectors is expected to provide an in-depth understanding of the economic dynamics in East Kutai, allowing for the identification of growth patterns and their relationship to community welfare. Based on data from the Central Statistics Agency, the GRDP of East Kutai Regency is still dominated by the mining and excavation sector, especially Mining and Quarrying, indicating dependence on natural commodities. GRDP in this sector reflects the economy of East Kutai Regency which still depends on natural resources. However, there is potential for development in the agricultural sector, especially plantations, and the processing industry sector. Along with the vast agricultural land and diverse natural resources, the East Kutai Regency Government is expected to develop these sectors in order to achieve a sustainable economic balance.

The labor force participation rate (TPAK), or economic activity rate, is the ratio between the number of the workforce and the overall size of the working age group in the national population. Generally, this term does not include entrepreneurs or management, and often refers to those who do manual work. TPAK includes all people who are ready to work. However, if the TPAK is low, this could indicate that many people of working age are not in the labor force because they are still in school or taking care of the household.

The income level in East Kutai Regency has increased during the 2018-2022 period, with an average growth of 2.4% per year. However, the income level is still relatively low, at around IDR 20 million per year. To increase people's income, efforts are needed to develop productive sectors such as agriculture, processing industry, and tourism. The East Kutai Regency Government also needs to focus on policies that support income equality and reduce poverty through poverty alleviation programs.

Data from the Central Statistics Agency shows that the average Human Development Index (HDI) of East Kutai Regency increased during the 2018-2022 period, with an average growth of 0.56% per year. The increase in the HDI is a positive indicator that the overall welfare of society has increased. However, the HDI value still reflects a low level of welfare, around 67.10 in 2022. Therefore, the East Kutai Regency Government needs to prioritize access to education and health services, create quality jobs, and reduce social and economic disparities to improve the welfare of society as a whole. Thus, a deep understanding of GRDP, income levels, and welfare levels is essential in designing more effective and sustainable development policies. This study is relevant because it can provide a better understanding of the dynamics of the economy and community welfare in East Kutai. The results of the study are expected to be valuable input for policy makers in designing more effective and sustainable development programs. In addition to directly observing the relationship between GRDP and community welfare, this study also considers the role of income levels as a mediator. The selection of this mediator is based on the understanding that income levels can be an intermediary in changing sectoral contributions into equitable community welfare. By detailing this background, it is hoped that this research can provide a significant contribution to understanding the dynamics of the economy and community welfare in East Kutai, as well as provide a basis for formulating more targeted policies.

2. LITERATURE REVIEW

Economic Growth

Economic growth, as an indicator of the economic health of a country or region, plays a central role in development. Strategies to achieve maximum economic growth involve various aspects, such as investment in human resources through improving the quality of education, building strong infrastructure to support productivity, and encouraging innovation and adoption of new technologies to increase efficiency. Wise fiscal and monetary policies are also key in stimulating investment and consumption that support growth. Diversification of economic sectors to reduce risk and increase economic resilience is also a strategic step.

Gross Regional Domestic Product (GRDP)

Gross Regional Domestic Product (GRDP) is defined as a very crucial indicator in assessing and measuring the economic performance of a region. The measurement of GRDP includes the total value added generated by all economic sectors within the region. The concept of value added, as the difference between the value of output and the value of input in economic activities, details that the value of output involves the total value of goods and services produced by economic activities, while the value of input involves the total value of goods and services used to create the output.

Labor Force Participation Rate

The labor force participation rate (LFPR), or economic activity rate, is the ratio of the number of people in the labor force to the total size of the working-age group in the national population. Generally, the term excludes entrepreneurs or management, and often refers to those who do manual labor. LFPR includes all people who are available to work. However, if the LFPR is low, it may indicate that many people of working age are not in the labor force because they are still in school or taking care of their households. Therefore, LFPR is influenced by the number of people who are still in school and who are taking care of their households (Muta'Ali, 2015).

Income Theory

Income, which is the financial flow received by an individual, household, or community over a period of time, is a crucial measure of economic well-being. As a primary indicator, income reflects the ability to purchase goods and services, and influences the standard of living and prosperity of society as a whole. Therefore, accurate measurement of income is essential for understanding economic trends, formulating effective policies, and evaluating societal progress (Blanchard, O., & Sheen, J., 2013).

Welfare Theory

Mankiw (2021) defines economic well-being as "a state in which a society can meet its life needs adequately and in balance, both materially and non-materially". Material needs include basic needs such as food, clothing, shelter, and health. While non-material needs include the need for security, education, recreation, and freedom. Sukirno (2014) states that economic well-being is "a state in which a society can meet its life needs sufficiently, both materially and non-materially". The sufficiency of material and non-material needs must be balanced so that people can live comfortably and happily.

3. METHOD

The analysis tools used are multiple linear regression test analysis and path analysis. Multiple linear regression analysis is used to determine the effect of three or more variables, consisting of one dependent variable and two or more independent variables. Path analysis is an analysis method used in research to test the effect of independent variables on dependent variables, including indirect effects through mediating variables. The analysis application used in this study is using the SPSS v25 application for partial relationship analysis and the Sobel

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Test using an online calculator to test the mediation effect. The regression analysis formula used in this study is as follows:

$$Y_1=\beta 0+\beta_1 X_1+\beta_2 X_2$$

$$Y_2=\beta 0+\beta_1 X_1+\beta_2 X_2$$

4. RESULTS AND DISCUSSION

The t-test is used to determine whether the independent variable has a partial real effect on the dependent variable or not. Before conducting the t-test, it is done by comparing the calculated t and the t table. The decision making is if the calculated t> t table then H1 is accepted and H0 is rejected, meaning that the independent variable has a partial effect on the dependent variable. The following are the results of SPPS data processing as follows:

Table 1. t-Test Results

Coefficients[a]

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	-.923	158.219		-.006	.995
	Laju_PDRB	12.158	3.286	.746	3.700	.006
	TPAK	4.620	2.425	.384	1.905	.093

a. Dependent Variable: PerKapita

Model		Unstandardized Coefficients B	Unstandardized Coefficients Std. Error	Standardized Coefficients Beta	t	Sig.
1	(Constant)	46.721	4.280		10.916	.000
	Laju_PDRB	-.049	.089	-.083	-.552	.596
	TPAK	.389	.066	.896	5.930	.000

a. Dependent Variable: IPM

Source: SPSS data processing results (2024)

Table 1. Shows that in the relationship with Income Level (Y1) the sig. value of Variable X1 (GRDP Rate) is 0.006, and the value of Variable X2 (TPAK) with a sig. value of 0.093. The relationship with the Human Development Index (Y2) the sig. value of Variable X1 (GRDP Rate) is 0.596, and the value of Variable X2 (TPAK) with a sig. value of 0.000. Before conducting data analysis, the t table value must first be found. In the distribution value of the table value, k (2), n (11), and α = 5% are known. With the formula for finding the t table = (α / 2; n-k-1) the resulting t table value is 2.306.

Mediation Test

To test whether the indirect effect uses the bootstrapping method or the Sobel Test. Currently, the Sobel Test is chosen because the use of the PROCESS macro uses bootstrapping which will be discussed in Method 2 on mediation analysis in SPSS. The Sobel Test is a method used to evaluate the statistical significance of indirect effects in mediation analysis. Although not available in SPSS, the Sobel Test can be easily performed using the online Sobel Test calculator (Abu-Bader & Jones, 2021).

Table 2. Sobel Test Results

Correlation	S-Statistic	P-Value
PDRB -> Pendapatan -> IPM	0,334	0,965
TPAK -> Pendapatan -> IPM	0,375	0,825

Source: SPSS data processing results (2024)

Table 2 shows the S-Statistic value of mediation of Variable Y1 (Income Level) on the relationship of Variable X1 (PDRB) to Y2 (HDI) is 0.334, and the P value of this construct is 0.965. The S-Statistic value of mediation of Variable Y1 (Income Level) on the relationship of Variable X2 (TPAK) to Y2 (HDI) is 0.375, and the P value of this construct is 0.825, so it can be concluded as follows

1. The Effect of Mediation of Income Level (Y1) on the Relationship of PDRB (X1) to the Human Development Index (Y2). The test results using the Sobel test calculator obtained a probability value of 0.965, so it is concluded that the P value is greater than the significance level of α 5% or 0.965> 0.05. So it is concluded that there is no mediation effect of Income Level (Y1) on the Relationship of PDRB (X1) to the Human Development Index (Y2).
2. The Effect of Income Level (Y1) Mediating on the Relationship between TPAK (X2) and the Human Development Index (Y2). The test results using the Sobel test calculator obtained a probability value of 0.825, so it is concluded that the P value is greater than the significance level of α 5% or 0.825> 0.05. So it is concluded that there is no mediating effect of Income Level (Y1) on the Relationship between TPAK (X2) and the Human Development Index (Y2).

5. CONCLUSION

The increase in GRDP in East Kutai Regency, especially driven by the mining sector and the oil and gas industry, contributed significantly to the increase in Income Level. The natural resources produced enrich the region and increase wages and employment opportunities for local residents. The Labor Force Participation Rate (LFPR) does not directly affect the Income Level in East Kutai. Although the LFPR is high, the increase in income is more influenced by the productivity and average wages of workers, not just the number of workers. Although high GRDP indicates economic growth, this does not always have a direct impact on the increase in the Human Development Index (HDI). Uneven income distribution and low investment in education and health cause the increase in GRDP not to be directly proportional to the increase in HDI. An increase in LFPR can support an increase in HDI by increasing household income and access to health and education services. Higher labor participation, especially by women, can contribute positively to welfare and HDI. A high Income Level does not always correlate with an increase in HDI. HDI is more influenced by access to and quality of health and education services than by the Income Level itself. Income Level is not significant enough as an intermediary between GRDP and HDI. Income distribution factors, quality of public services, and government policies have a greater influence on the HDI. Although the TPAK is high, if wages are low and jobs are unstable, the Income Level will not be enough to increase the HDI. Job quality and social inclusion determine the HDI more than the TPAK itself. GRDP and TPAK together can increase the Income Level in East Kutai. The combination of a productive economy and high labor force participation results in a significant increase in income. GRDP and TPAK together can increase the HDI by strengthening the economy and improving the quality of life through investment in public services. The combination of the two encourages improvements in welfare, health, and education.

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