THE IMPACT OF HUMAN GROWTH INDEX ON YEARS OF EDUCATION AND POVERTY IN 14 DISTRICTS OF WEST KALIMANTAN FOR THE PERIOD 2021-2023

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Abstract

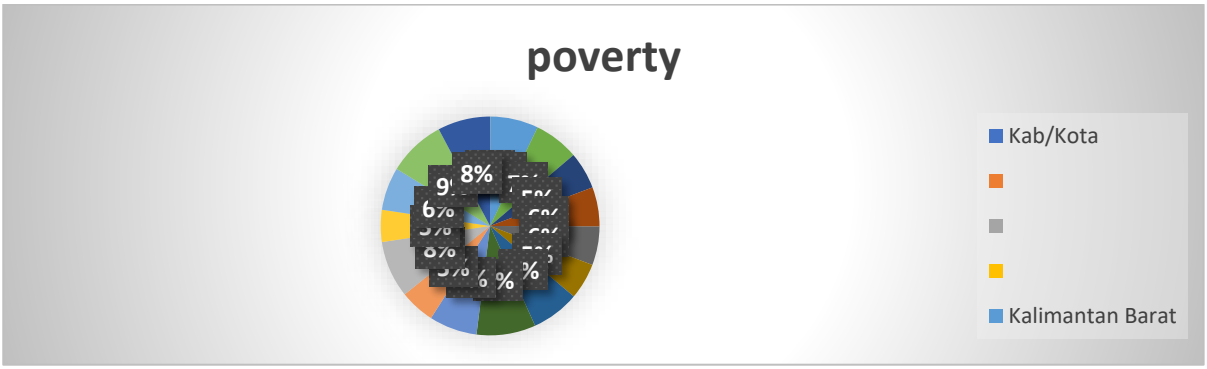
This research aims to analyze the influence of the Human Growth Index (HDI) on length of education and poverty levels in 14 districts in West Kalimantan Province in the 2021-2023 period. The Human Growth Index is an important indicator in determining the quality of life and welfare of the population, which can have implications for various socio-economic aspects, including education and poverty. This research method uses multiple linear regression analysis to measure the influence of HDI on the selected dependent variables.

Keywords: Human Growth Index, length of education, poverty

A. Introduction

The Human Development Index (HDI) is a measure used to measure a country's development success. Poverty issues are a major concern for the governments of the 14 districts of West Kalimantan. Poverty levels in each district vary and are on a downward trend. However, this decrease has not reached a significant level. In West Kalimantan, poverty in the 14 districts remains one of the main priorities to be overcome. Another factor that is also receiving attention is the average length of schooling in the community, which plays a major role in improving the quality of life and competitiveness of the population.

Table Date : 1.1



Source: BPS 2023 provinsi kalimantan barat

In West Kalimantan, poverty in the 14 districts remains one of the main priorities to be overcome. Another factor that is also receiving attention is the average length of schooling in the community, which plays a major role in improving the quality of life and competitiveness of the population. Meanwhile, a similar situation was observed in other areas such as Sidoarjo Regency, East Java. According to data from the Central Statistics Agency (BPS), the poverty level in Sidoarjo is relatively high when compared to surrounding areas such as Surabaya, Madiun, Malang and Batu.

Sukirno (2008, p. 30), the increase in the number of unemployed people and the unequal distribution of income are very closely related to poverty. When the level of labor utilization is at an

optimal state or full employment, people's income tends to reach the maximum level. On the other hand, unemployment has a direct impact on the decrease of people's income, which ultimately reduces the level of welfare and causes poverty. Unemployment is not only an economic obstacle, but also increases social disparities and hinders sustainable development.

One of the key factors related to worker welfare is the regulation of minimum wage. Based on the Ministry of Labor and Immigration Regulation No. 7 of 2013, the minimum wage is defined as the minimum monthly salary that employers must pay to workers. This wage includes the basic wage and fixed allowances approved by the Governor as a safe limit. Apart from that, the minimum wage also includes sectoral, sub-sectoral and sub-regional provisions that are determined to ensure that each worker receives a wage sufficient to meet the basic needs of life.

Suryawati's opinion (in Fatkhul Mufid 2014) is that poverty is not only a matter of living within limitations on a low income, but is also influenced by a range of other factors. These factors include low levels of education and health, inequalities in law enforcement, the powerlessness of individuals in determining and fighting for the direction of their lives, etc. In this context, poverty is seen not only as an economic problem but also as a complex and multidimensional social problem.

The Central Statistical Agency (BPS, 2021) explains that the Human Development Index (HDI) is an important indicator in assessing people's quality of life. HDI represents the extent to which a society has access to various development resources such as income, education, and health services. This indicator is used to measure the success of human development based on three main dimensions: (1) knowledge or education level; (2) economically viable quality of life; and (3) life expectancy reflecting public health.

These three fundamental dimensions are closely related in determining the level of welfare of a society. **The education dimension** includes the average and expected years of schooling, which reflects access to knowledge as a means to enhance an individual's competitiveness. The decent living dimension assesses the extent to which people's income meets their basic needs, including food, clothing and shelter. Meanwhile, **the longevity dimension** reflects the level of life expectancy and the quality of health services a community receives.

Poverty is often the result of an imbalance between these three dimensions: low levels of education, for example, can limit access to decent jobs and therefore lower incomes, while poor access to health services can lead to reduced productivity and life expectancy, ultimately exacerbating poverty situations.

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Opinion (Manufuttu and Hartadi 2021) Poverty is a complex and multifaceted problem in the economy, so it requires an effective solution or plan to overcome poverty or at least reduce the level of poverty.

Based on the above background, the research problem statements are as follows:

1. What is the impact of the Human Development Index (HDI) on education duration in the 14 districts of West Kalimantan for the 2021-2023 period?
2. What is the impact of the Human Development Index (HDI) on poverty in the 14 districts of West Kalimantan for the 2021-2023 period?

B. Literature Review and Hypothesis Development

Human Development Index Theory

The Human Development Index (HDI) is a composite measure used to measure the quality of a region's development based on three main dimensions: health (a long and healthy life), education (knowledge) and a decent standard of living. The HDI was developed by the United Nations Development Programme (UNDP) to provide a non-monetary benchmark of regional development. **(Yani, Lestiatun, and Sladi 2022).** This article focuses on factors that affect poverty in West Kalimantan, such as economic growth, education, and allocation of government funds.

1. HDI dimensions: Relationship between education and years of education

The education dimension of the HDI is measured by expected years of schooling and average years of schooling, which indicates the access and attainment of people in a region. Theories that support this relationship include:

a. Human Capital Theory: Proposed by (Becker 1993) , human capital theory explains that education is an investment to improve an individual's skills and knowledge. An increase in the average number of years of schooling or duration of education is generally directly related to increased productivity and improved workforce capacity.

b. Functionalist Theory of Education : According to functionalist theory, education serves as a means of social integration that prepares individuals for their role in society. High average years of education in an area reflects the readiness of individuals to participate productively in society and access wider economic opportunities.

2. HDI and Poverty

The relationship between HDI and poverty is explained by several theories, including:

a. Structural Poverty Theory : Structural poverty explains that limited resources and access to quality education services cause inequalities in human development. Areas with low HDI tend to

have higher levels of poverty as communities have limited access to education, health care and decent work.

b. ***of*** **poverty theory** : The cycle of poverty explains how poverty becomes self-reinforcing through several dimensions, including education. In low HDI areas, limited access to decent education leads to a lack of the skills and knowledge needed to get better jobs, ultimately worsening poverty.

c. Modernization Theory: This theory argues that improvements in education, especially in the aspects of education and living standards through HDI indicators, can impact poverty by expanding people's access to the job market and increasing their income levels.

The impact of HDI on length of education

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4. The impact of HDI on length of education

Higher HDI levels in regions tend to improve quality and access to education. The relationship between HDI and years of education can be explained as follows:

a. Improving the quality of education: Regions with high HDI scores often have better access to educational infrastructure, qualified teachers, and education programs that support longer education years.

b. Investing in the education sector: Regions with high HDI usually have higher education budgets, which allows for improved educational facilities and quality, and increases the average number of years of education for the community.

5. The impact of HDI on poverty

In theory, increasing HDI can reduce poverty levels through several mechanisms.

a. Increased community income: An increase in the HDI through better education and health makes people more productive and competitive in the labour market, thereby enabling them to earn more. Higher incomes reduce poverty.

b. Social mobility: Social mobility theory suggests that education can be a means to improve an individual's economic status. Increasing the HDI, especially in the education dimension, can help more people access higher education and better jobs, thereby breaking the cycle of intergenerational poverty.

6. HDI and Poverty in West Kalimantan

West Kalimantan province faces unique challenges to increasing HDI, including gaps in education infrastructure and economic disparities in some districts. Geographic and accessibility challenges also affect human development in the region. Generally, areas with low HDI have higher poverty levels and shorter years of education due to limited access.

7. Empirical studies on HDI, years of education, and poverty

Several empirical studies have shown a positive correlation between HDI and years of education and a negative correlation between HDI and poverty.

a. **Relationship between HDI and years of education:** Studies have found that an increase in HDI typically correlates with an increase in the average years of schooling in a region, due to increased access to education and government support for education.
b. **The relationship between HDI and poverty:** Other studies have shown that a higher HDI in an area has an impact on reducing poverty levels as people have better access to education, health and decent work.

C. **Research Methodology**

This study uses a quantitative approach to analyze the determinants of human resource growth through Human Development Index in West Java province/city.

1. Research Format

This form of research is a form of quantitative research. Quantitative research can be done by collecting data as numbers. The data in numerical form is then processed to obtain scientific information (Martono 2011:35)

2. Study location and time

The survey was conducted in 14 districts in the West Kalimantan cities of Sambas, Bengkayan, Landak, Mempawa, Sangau, Ketapang, Sintang, Kapuas Hulu, Secadau, Melawi, North Kayong, Pontianak City and Singkawang City over a period of three years (2019-2021)

3. Data

Secondary data is data that is already available on government or other websites (Martono 2011:37) Data for this study were obtained from http://www.bps Kalbar.

C. Testing the Model

1. Stationarity Test

Stationarity tests are performed to determine whether the data are affected by trends

2. Heteroscedasticity test

Heteroscedasticity tests are performed to find out if there is heterogeneous variation among the data (groups) (Nisfiannoor 2009:70).

3. Multicollinearity tests

Multicollinearity is a tool that determines whether there is correlation between independent variables in a regression model.

4. Autocorrelation Test

Autocorrelation is the correlation between observation members arranged on a time series basis (Suharyadi and Purwanto 2003:25)

5. Analysis Method

According to (Basuki 2016:50) , regression model estimation methods using panel data can be carried out through three main approaches:

1. Common effects model

This is the simplest method of panel data analysis since it only involves combining *cross-sectional data with the and Estimation of panel data models using this approach* can be carried out using *ordinary least squares* . (OLS) or least squares.

2. Fixed effects model

This model assumes that differences between individuals can be represented by changes in the intercept value.

3. Random effects model

This model is used to estimate panel data taking into account possible relationships between disturbance variables both over time and between individuals..

6. Judgment test (R2)

The coefficient of determination (R^2) is used to measure the extent to which the independent variables are able to explain the dependent variable. R^2 values range from 0 to 1 ($0 \leq R^2 \leq 1$).

7. Simultaneous testing (F-count test)

The joint test (F-statistic test) aims to test whether all the independent variables included in the model affect the dependent variable simultaneously (Ghozali 2011:38) .

Partial test (t-test)

The t-statistical test is used to measure the extent of influence of each independent variable individually in explaining the variation in the dependent variable (Surakhmad 2009:50)

D. Results and Discussion

1. Chow Test

Redundant fixed effects tests			
Formula: EQ02			
Cross-sectional fixed effects tests			
Efficacy Test	statistics	Defender	problem
Section F	175.311219	(13.53)	0.0000

Chi-square cross section	264.894650	13	0.0000

Chi-square probability cross section <0.05 = best fitting equation model is fixed effects

2. Hausman test

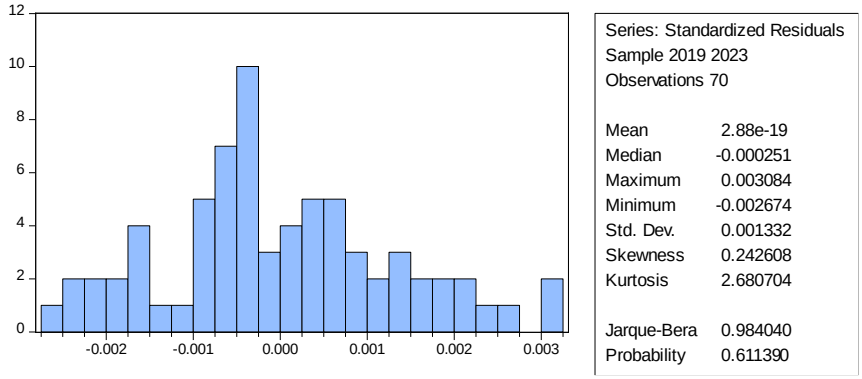
Correlated random effects - Hausman test			
Formula: EQ03			
Cross-sectional random-effects tests			
Testing Overview	Chi-square statistics	Chi-squared DF	problem
Random Cross Section	38.072811	3	0.0000

Prob Cross-sectional Random <0.05 = Most fitting equation model is fixed effects

Conclusion = The model used in the eview equation is a fixed effects model.

3. Classical Assumption Testing

a. Normality test



ProblemsIf the Jarque-Bera test >0.05, we can conclude that the data is normally distributed.

b. Autocorrelation test

Use the Durbin-Watson test for dL>DW>4-dL

Dl	DW	4-dL
1.4943	1.789280	2.5057

The test results show that there is no autocorrelation in the study data.

4. Heteroscedasticity tests

Dependent variable: RESABS				
Method: Least Squares Panel				
Date: 09/23/24 Time: 04:27				
Sample: 2019, 2023				
Included periods: 5				
Sections included: 14				
Total panel (balanced) observations: 70				
Variable	coefficient	Standard Error	t-statistics	problem
C	-0.028325	0.030327	-0.933966	0.3537
IPM	0.008662	0.004296	2.016125	0.0479
Poverty	-0.007571	0.007238	-1.046091	0.2993
Old School	-0.015616	0.023925	-0.652737	0.5162

The independent variables are regressed on the residual absolute variables using the Glejser test. When the value of prob is greater than 0.05, it is stated that the study data does not have heteroscedasticity.

5. Multiple Linear Regression Output

Dependent variable: HDI				
Method: Least Squares Panel				
Date: 09/23/24 Time: 04:03				
Sample: 2019, 2023				
Included periods: 5				
Sections included: 14				
Total panel (balanced) observations: 70				
Variable	coefficient	Standard Error	t-statistics	problem
C	1.084402	0.052971	20.47162	0.0000
Human Growth Index	0.096088	0.008553	11.23476	0.0000
Poverty	0.006438	0.013227	0.486723	0.6285
Old School	0.065529	0.032350	2.025661	0.0478
	Effect Specifications			
Cross-sectional fixation (dummy variable)				
R-Square	0.996907	Mean dependent variable		1.832135
Adjusted R-squared	0.995974	SD dependent variables		0.023950
Regression SE	0.001520	Akaike Information Criterion		-9.933098

Sum of Squares Residual	0.000122	Schwartz Criterion	-9.387035
Log-likelihood	364.6584	Hanan Quinn Criteria.	-9.716195
F-statistic	1067.814	Durbin-Watson Statistics	1.789280
Probability (F statistic)	0.000000		

6. Dependent Variable

HDI = Human Development Index

Independent Variable

GRDP = Regional Gross Domestic Product

Poverty = % of population living in poverty

Years of schooling = Average period of time the population receives public education

E. Conclusion

If the probability value is <0.05, the independent variable is declared to have an effect on the dependent variable.

Probability value. Human growth relative to HDI is 0.0000 = positive and significant effect

Probability value. HDI poverty is 0.6285 = no impact

Probability value. HDI for years of schooling is 0.0478 = positive and significant effect

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