



**International Journal of Education, Social Studies,
And Management (IJESSM)**

e-ISSN : 2775-4154

Volume 4, Issue 2, June 2024

The International Journal of Education, Social Studies, and Management (IJESSM) is published 3 times a year (**February, June, November**).

Focus : Education, Social, Economy, Management, And Culture.

LINK : <http://lppipublishing.com/index.php/ijessm>

The Effect of Poverty Level on Human Development Index (HDI) in North Sumatera Province in 2018

Armin Rahmansyah Nasution¹, Annisa Handayani², Rinaldi³, Tina Angelia⁴,
Tegar Efraim Gilbert Siahaan⁵, Febry Br Hutabarat⁶

^{1,2,3,4,5,6} Universitas Negeri Medan, Indonesia

ABSTRACT

Development is a planned process of social change to improve the quality of life. In improving human development, welfare equalization is necessary because it is an important aspect of human development. Unfortunately, poverty is a major obstacle in achieving welfare equality. Therefore, this study was made with the aim of examining the relationship between the poverty rate and the Human Development Index (HDI) in North Sumatera Province. This research is a quantitative research, data collection using secondary data sourced from books, journals relevant to the current research and reports at the Central Statistics Agency (BPS) of North Sumatera Province. The data studied includes the poverty rate and human development index (HDI) in North Sumatera for the 2018 period. Based on data from BPS North Sumatera Province in 2018, the results found that the poverty rate has a negative and significant effect on the Human Development Index.

Poverty Level, Human Development Index, North Sumatera

[10.52121/ijessm.v4i2.273](https://doi.org/10.52121/ijessm.v4i2.273)

annisahandayanis60@gmail.com

ARTICLE INFO

Article history:

Received
22 March 2024
Revised
27 April 2024
Accepted
25 May 2024

Keywords

Doi

Corresponding
Author 

INTRODUCTION

Development is a transformation process that covers the entire social system, be it education, health, or the economy. Development is a planned process of social change, because it includes various dimensions to improve progress in economic welfare, renewal, nation building, environmental insight, and improving human quality (R. Maulana et al., 2022). Improving human quality is an indicator of development.

Development in a country is not only seen from its economic development. Through the UNDP (United Nation Development Programme), the Human Development Index was built to create an emphasis that people and their skills should be a major indicator in assessing the development that occurs in a country, not only seen from economic growth.

The calculation of the Human Development Index (HDI) is based on three components that are related to each other. These three components include longevity and healthy living, knowledge, and a decent standard of living (BPS, 2022). The three components were first introduced by the UNDP (United Nation Development Program) in 1990. Indonesia currently uses the latest HDI calculation method that was refined in 2014 by UNDP. The three indicators used in the calculation of HDI are Life Expectancy (UHH) which is a reflection of longevity and healthy living, then indicators of Expected Years of Schooling (HLS) and Average Years of Schooling (RLS) which are a reflection of Knowledge, as well as National Income (GNP) and Per Capita Income (PPP) as a reflection of the decent living component.

Table 1.
HDI and HDI Components of North Sumatra Province, 2020-2023

No	Tahun	Umur Harapan Hidup (UHH)	Harapan Lama Sekolah (HLS)	Rata-rata Lama Sekolah (RLS)	Pendapatan Riil per Kapita (PPP)	Indeks Pembangunan Manusia
1	2020	73,00	13,23	9,54	10.420	73,62
2	2021	73,10	13,27	9,58	10.499	73,84
3	2022	73,39	13,31	9,71	10.848	74,51
4	2023	73,67	13,48	9,82	11.049	75,13

Human Development in Indonesia is still synonymous with poverty reduction (Ginting in (Simarmata & Iskandar, 2022). This means that improving the quality of human resources focuses on reducing poverty. The percentage of poor people in North Sumatra is at 9.01% (2021), which means that the poor population in North Sumatra in 2021 has increased when compared to the previous year, which was 8.75%. In the study (Mirza, 2012) it is explained that poverty has a negative and significant effect on the Human Development Index. A similar statement was also made by Maulana in his study (R. Maulana et al., 2022) that poverty has a significant effect. In recent years, poverty and human development have become the main focus in pursuing development in Indonesia, especially in North Sumatra. In improving human development, welfare equalization is needed because it is an important aspect of human development. Unfortunately, poverty is the main obstacle in achieving welfare equality. Therefore, this study was made with the aim of examining the

relationship between the poverty rate and the Human Development Index (HDI) in North Sumatra Province.

RESEARCH METHODE

This research is quantitative research, according to (Sugiyono, 2013) quantitative research is a research method based on the philosophy of positivism, as a scientific method or scientific because it has fulfilled scientific rules concretely or empirically, objectively, measurable, rational and systematic.

Data collection uses secondary data sourced from books, journals relevant to current research and reports on the Central Statistics Agency (BPS) of North Sumatra Province. The data taken is cross section data. Cross section data is data collected in one particular period to describe the conditions and circumstances in that period (Supranto, 2016). The data studied includes the poverty rate and human development index (HDI) in North Sumatra by Regency / City for the 2018 period.

The existing data is then analyzed using a simple regression test, using the SPSS 23 application, the following equation:

$$Y = \alpha + \beta_1 X_1 + \varepsilon$$

Where:

Y : Human Development Index

X1 : Poverty

a : Constant

β : Regression Coefficient

ε : Standard Error

RESULT AND DISCUSSION

Descriptive Statistical Test

Table 2.
 Descriptive Statistical Test Results Descriptive Statistical Test

Descriptive Statistics					
	N	Minimu m	Maximu m	Mean	Std. Deviation
Kemiskinan	33	4	27	11.33	4.955
Indeks Pembangunan Manusia	33	60	81	69.97	4.763
Valid N (listwise)	33				

Classical Assumption Test

Normality Test

The normality test is carried out to test whether the independent variable and the dependent variable are normally distributed or not.

Table 3.
Normality Test

One-Sample Kolmogorov-Smirnov Test		
		Unstandardized Residual
N		33
Normal Parameters ^{a,b}	Mean	.0000000
	Std. Deviation	3.26058671
Most Extreme Differences	Absolute	.080
	Positive	.080
	Negative	-.077
Test Statistic		.080
Asymp. Sig. (2-tailed)		.200 ^{c,d}

Based on table 3, above that the normality test results have a large significance value of $0.200 > 0.05$, this means that the data is normally distributed.

Multicollinearity Test

Multicollinearity test is conducted to test whether the data correlation between independent variables in the regression model.

Table 4.
Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	Kemiskinan	1,000	1,000

Based on table 3, the results of the multicollinearity test can be seen that the tolerance value is $1,000 > 0.10$ and from the VIF (Variance Inflation Factor) value, namely $1,000 < 10$ so that the data does not occur multicollinearity symptoms.

Autocorrelation Test

The autocorrelation test is carried out to test whether the linear regression model has a correlation or not in the variables.

Table 5.
Autocorrelation Test

Model	R	R Square	Durbin-Watson
1	.764 ^a	.584	1.646

By looking at the Durbin Watson table with $n = 33$ and $k = 1$, the value of $dL = 1.3834$ and $dU = 1, 5078$ is obtained, then $(4 - dU) = 2.4922$ and $(4 - dL) = 2.6166$. Based on Table 4, the Durbin Watson (dW) value is 1.646. When viewed from the decision in testing the autocorrelation test where $dU < dW < 4 - dU$ or $1.5078 < 1.646 < 2.4922$, it means that the data does not occur autocorrelation symptoms.

Hypothesis Test

Linear Analysis Test

Table 6.
Linear Analysis Test

Model		Unstandardized Coefficients	
		B	Std. Error
1	(Constant)	77,906	1,457
	Kemiskinan	-,701	,118

Based on table 5. Then a simple linear regression model can be written as follows:

$$y = 77.906 - 0.701X + \varepsilon$$

The regression equation above explains the results of the regression coefficient for variable X1 of -0.701. The constant value is 77.906, which means that if the other independent variables are 0, the Human Development Index variable decreases by 77.906%.

Based on the regression equation shows that the Poor Population variable (X) has a negative coefficient with the Human Development Index variable of -0.701, which means that every 1 unit increase in the poor population, the Human Development Index will decrease by 0.701.

Determination Coefficient Test

The Coefficient of Determination test is carried out to measure how far the model's ability to explain the data. The coefficient of determination is between zero and one. A value close to 1 or 100% is said that the independent variable provides almost all the information needed to predict the data variable.

Table 7.
Determination Coefficient Test

Model	R	R Square
1	.729 ^a	.531

Based on table 8, the coefficient of determination obtained is 53.1%. This means that 53.1% of the model's ability can explain the Human Development Index, so that the analysis of the effect of poverty on the Human Development Index in North Sumatra Province in 2018 is 53.1% while the remaining 46.9% comes from other variables.

Simple Regression Test

Simple regression test is conducted to determine whether or not there is an influence of the independent variable on the dependent variable.

Table 8.
Simple Regression Test

Model		t	Sig.
1	(Constant)	53,453	,000
	Kemiskinan	-5,929	,000

Based on table 7, the sig value of the independent variable is smaller than α (0.05), meaning that the Poverty variable (X) affects the Human Development Index (Y). So H_0 is rejected and H_a is accepted that the poverty rate variable negatively affects the development index in North Sumatra Province.

Effect of Poverty Level on Human Development Index

Poverty is a major problem in development in Indonesia (Roidah, 2016). Poverty is one of the factors inhibiting the achievement of equitable welfare. Poverty is a source of problems because people will experience various other problems such as a decrease in the quality of life, problems with education, health, malnutrition, and so on. In improving human development, it is necessary to improve the quality of life, education, and community welfare. This is why poverty is often linked to HDI. In line with this, North Sumatra, which is one of the provinces in Indonesia, has a poverty rate below the average poverty rate in Indonesia, which is 8.63% of 9.22%. This raises the question of whether Poverty can affect the Development index in North Sumatra Province.

Based on the results of the analysis that has been carried out, the poverty variable has been proven to have a significant negative effect on the Human Development Index in North Sumatra. Of course, this is in accordance with the

research hypothesis which states that the poverty rate variable has a negative effect on the Human Development Index in North Sumatra Province. The results of this study are also in line with several previous studies conducted by (Tarumingkeng et al., 2018) and research by (Mirza, 2012), so it can be concluded that poverty has a negative and significant effect on the Human Development Index.

Human Development plays an important role in improving the Indonesian economy. High poverty will hinder the increase in development activities in Indonesia. High poverty certainly requires important attention for the government. Development as a form of welfare realization will never be achieved if the poverty rate in Indonesia is still quite significant. Various research results make it clear that the increasing poverty population will suppress human development. This is because the poor have low purchasing power for activities that have the potential to improve their own quality.

CONCLUSION

Based on the results of this study, it was found that the poverty rate negatively affects the Human Development Index in North Sumatra Province based on data from BPS North Sumatra Province in 2018. Simple regression analysis with SPSS 23 shows a significant relationship between the two variables. The results of the classical assumption test showed that the data used in this study met the statistical requirements. This finding underscores the importance of poverty reduction in efforts to improve human development in the region.

REFERENCES

- Badan Pusat Statistik Sumatra Utara. (2015). Indeks Pembangunan Manusia Provinsi Sumatra Utara. BPS.
- BPS. (2018). Profil Kemiskinan Provinsi Sumatra Utara. BPS.
- BPS. (2022). Indeks Pembangunan Manusia 2022. In Badan Pusat Statistik.
- Dewi, N., Yusuf, Y., & Iyan, R. Y. (2017). Pengaruh Kemiskinan Dan Pertumbuhan Ekonomi Terhadap Indeks Pembangunan Manusia Di Provinsi Riau. *JOM Fekon*, 4(1), 870-882.
- Maulana, R., Pitoyo, A. J., & Alfana, M. A. F. (2022). Analisis Pengaruh Kemiskinan dan Kondisi Ekonomi Terhadap Indeks Pembangunan Manusia di Provinsi Jawa Tengah Tahun 2013-2017. *Media Komunikasi Geografi*, 22(1), 12-24.
- Mirza, D. S. (2012). Pengaruh Kemiskinan, Pertumbuhan Ekonomi, dan Belanja Modal Terhadap Indeks Pembangunan Manusia di Jawa Tengah Tahun 2006-2009. *Economics Development Analysis Journal*, 1(1), 2-15.

- Roidah, I. S. (2016). Evaluasi Kebijakan Pengentasan Kemiskinan Dalam Program Keluarga Harapan Di Kecamatan Rejotangan Kabupaten Tulungagung. *Jurnal Agribisnis Fakultas Pertanian Unita*, 7(1), 39–55. <https://journal.unita.ac.id/index.php/agribisnis/article/view/113>
- Simarmata, Y. W., & Iskandar, D. D. (2022). Pengaruh Pengeluaran Pemerintah, Investasi, Jumlah Penduduk, Kemiskinan Terhadap Pertumbuhan Ekonomi dan Ipm: Analisis Two Stage Least Square Untuk Kasus Indonesia. *Jurnal Dinamika Ekonomi Pembangunan*, 5(1), 78–94. <https://doi.org/10.14710/jdep.5.1.78-94>
- Sugiyono. (2013). *Metode Penelitian Kuantitatif Kualitatif dan R&D*. ALFABETA.
- Supranto. (2016). *Statistik Teori & Aplikasi* (A. Maulana (Ed.)). Penerbit Erlangga.
- Tarumingkeng, W. A., RUMATE, V. A., & Rotinsulu, T. O. (2018). Pengaruh Belanja Modal Dan Tingkat Kemiskinan Terhadap Indeks Pembangunan Manusia (Ipm) Di Provinsi Sulawesi Utara. *Jurnal Pembangunan Ekonomi Dan Keuangan Daerah*, 19(6), 82–95. <https://doi.org/10.35794/jpekd.19789.19.6.2018>

Copyright Holder :

© Armin (2024).

First Publication Right :

© International Journal of Education, Social Studies,
and Management (IJESSM) This article

