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The Impact of Poverty, Education Spending, and Village Funds on the Human Capital Index in the Nias Islands

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ABSTRACT

The Human Development Index can be used as an indicator of successful development in a country or region. In 2023, the lowest Human Development Index in North Sumatra Province was in the Nias Islands, namely West Nias Regency (63.70), South Nias Regency (64.13), Nias Regency (64.56), and North Nias Regency (64.64). Only Gunungsitoli City ranks in the lowest 10 out of 33 regencies/cities with an index of 70.68. This study aims to determine whether Poverty, Education Expenditure, and Village Funds have an impact on the Human Development Index in the Nias Islands. The results showed that partially Poverty has a negative and significant impact, Education Expenditure has a positive but insignificant impact, and Village Funds have a positive and significant impact on the Human Development Index in the Nias Islands. Poverty, education expenditure, and village funds simultaneously have a significant impact on the Human Development Index. Poverty, education expenditure, and village funds can explain the Human Development Index by 93.766%. The remaining 6.234% is accompanied by other variables that are not included in the object of this study. Therefore, the Government should create programs for poverty alleviation and optimize Education Expenditure and Village Funds to increase the Human Development Index in the Nias Islands.

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INTRODUCTION

The Human Development Index is a measure of the geometric mean of the achievement of human development dimensions which include a long and healthy life, education, and having a decent standard of living. (Suhyanto et al., 2020). The Human Development Index explains how the population can access development results by obtaining income, health, education, and so on. (BPS, 2024). UNDP (1990) states that the main goal of development is people so the Human Development Index becomes an alternative measurement of the success of a country's development. Therefore, the better the Human Development Index, it is expected that development will have a good impact on the people in a country or region.

Based on data from the Central Statistics Agency (BPS), the lowest Human Development Index in North Sumatra Province in 2023 was in Nias Islands. Of the 33 regencies/cities in North Sumatra Province, only Gunungsitoli City is in the lowest ten with an index of 70.68. Meanwhile, four other regencies are at the bottom, namely West Nias Regency (63.70), South Nias Regency (64.13), Nias Regency (64.56), and North Nias

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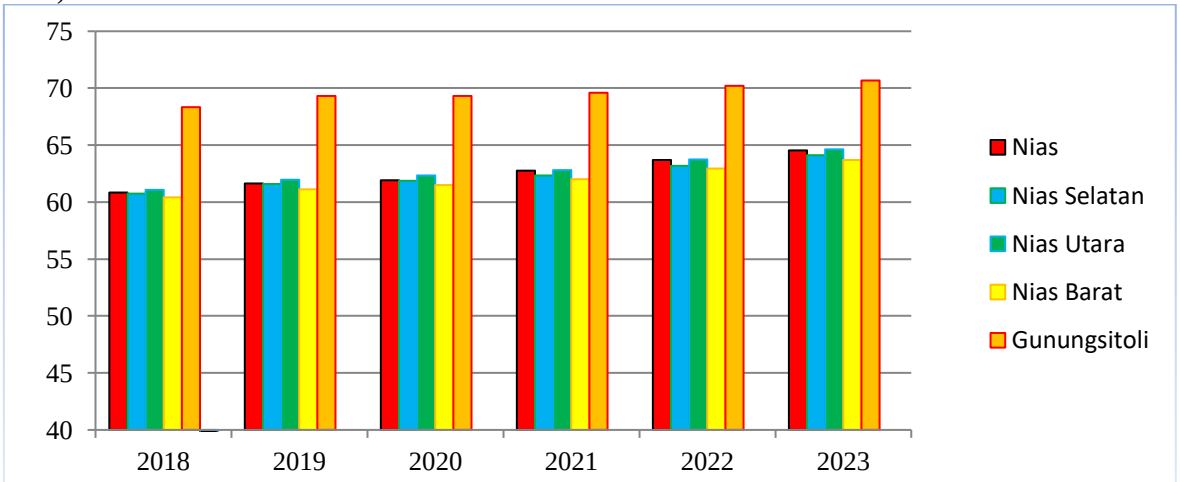
Regency (64.64). The index is still below the HDI of North Sumatra Province, which amounted to 73.37. (BPS, 2024).



Graphic 1. 2018-2023 Human Development Index in Nias Islands

Poverty is one of the causes of the low Human Development Index in a region. The poor are people who have no source of livelihood at all and/or have a source of livelihood but cannot fulfill the basic needs that are appropriate for the life of themselves and/or their families. (UU RI, 2011).

BPS (2021) defines poverty as a situation in which a person is unable to fulfill the minimum basic needs necessary for a decent and dignified life. The government (BPS and several parties in several seminars and meetings) agreed to measure poverty from an economic point of view using the monetary approach. Furthermore, it is stated that a person whose income/expenditure is less than the poverty line is categorized as poor.

The Human Development Index in Nias Islands is inversely proportional to the percentage of poor people in Nias Islands in 2023 which has the highest percentage in North Sumatra Province. The order of percentage from the largest is West Nias Regency (22.81%), North Nias Regency (21.79%), South Nias Regency (16.39%), Nias Regency (15.10%), and Gunungsitoli City (14.78%). This percentage is quite far compared to the average percentage of poor people in North Sumatra Province, which is 8.15%. (BPS, 2024). Therefore, the government is expected to be able to create programs that can reduce the number of poor people, especially in Nias Islands to be able to increase the Human Development Index in Nias Islands.

In addition to poverty alleviation programs, the government can also use fiscal policy to increase the Human Development Index, especially in the Nias Islands. Fiscal policy is an economic policy to directs economic conditions to be better by changing government revenues and expenditures. (Falianty, 2019).

The fiscal policy that can be carried out by the Government to improve the Human Development Index is a policy in Government spending. Government expenditure that is the object of this research is Local Government Expenditure in the education sector/function, hereinafter referred to as Education Expenditure, and Village Fund expenditure that has been absorbed/realized by the Village, hereinafter referred to as Village Fund.

Government Regulation of the Republic of Indonesia Number 18 of 2022 mandates an annual education budget allocation of at least 20% of the total government budget. This very large budget is expected to be able to increase the capacity of the people in the Nias Islands. The provision of school facilities in the form of school buildings and the infrastructure in them, increasing the capacity of teachers, and also free education programs will make it easier for people to get education so that it will increase the percentage of literate people and reduce the illiteracy rate in Nias Islands. This will have an impact on increasing the Human Development Index in Nias Islands.

In addition, since the issuance of Law Number 6 of 2014 concerning Villages, the Government has been more serious in carrying out regional development starting from the Village as the smallest unit in the government structure in Indonesia that is directly related to the community. The Village Fund policy is one of the solutions provided by the government to develop villages that have not been touched by development (Simangunsong et al., 2021).

Since 2015, the government has distributed funds from the State Budget (APBN) to the Village Government, known as the Village Fund (BKF, 2018). The Village Fund is part of the transfers to the regions earmarked for villages to support the funding of governance, development implementation, community empowerment, and community (Peraturan Pemerintah, 2023). The Village Fund allocation is equal to at least

10% (ten percent) of the balancing funds received by the Regency/City in the Regional Revenue and Expenditure Budget after deducting the Special Allocation Fund (UU RI, 2014).

The Village Fund is expected to have an impact on increasing the Human Development Index in the Village through the development of Village infrastructure that makes it easier for people to get access to education and health, as well as facilitating the distribution of agricultural products, plantations, fisheries, and other production products to increase community income.

Based on the problems of the Human Development Index, poverty, and government policies, researchers conducted a study on the impact of Poverty, Education Expenditure, and Village Funds on the Human Development Index in Nias Islands with the following hypothesis formulation:

H1: Is there an impact of Poverty on the Human Development Index in the Nias Islands;
H2: Is there an impact of Education Expenditure on the Human Development Index in the Nias Islands;
H3: Is there an impact of the Village Fund on the Human Development Index in Nias Islands;
H4:Is there a simultaneous impact of Poverty, Education Expenditure, and Village Funds on the Human Development Index in Nias Islands.

METHOD

This study uses secondary data sourced from the Central Statistics Agency and the Ministry of Finance. The Human Development Index and Percentage of Poor Population were obtained from the Central Bureau of Statistics of North Sumatra Province and data on Education Expenditure and Village Funds were sourced from the Ministry of Finance (Directorate General of Fiscal Balance and Directorate General of Treasury). The data used in the study are data on the Percentage of Poor Population, realization of Education Expenditure, absorption of Village Funds, and Human Development Index in Nias Islands from 2018 to 2023.

The methodology used in this research is quantitative method. The analysis method in this research is panel data regression. Panel data is a combination of time series data and cross-sectional data. (Basuki, 2014). Data processing is done using the EViews 13 application analysis tool. The tests carried out are the T-test (partial), the F-statistic test (simultaneous), and the coefficient of determination.

Before conducting the test, first select the most appropriate model between the Common Effect Model (CEM), Fixed Effect Model (FEM), or Random Effect Model (REM). To get the most appropriate model, the Chow Test, Hausman Test, and Lagrange Multiplier Test are conducted.

1. Chow Test
   The Chow test is a test to determine the Fixed Effect or Random Effect model that is most appropriately used in estimating panel data. (Basuki, 2014). If the Chi-square probability value for the Redundant Fixed Effect Test data is smaller than the tolerance value of 0.05, the correct model is FEM. However, if the Chi-square probability value is greater than 0.05 then the correct model is CEM.
2. Hausman Test
   The Hausman test is a statistical test to choose whether the Fixed Effect or Random Effect model is most appropriate to use. (Basuki, 2014). If the probability value of the cross-section random data Correlated Random Effect - Hausman Test is smaller than the tolerance value of 0.05, the correct model is FEM. However, if the cross-section random probability value is greater than 0.05, the correct model is REM.
3. Lagrange Multiplier Test
   To determine whether the Random Effect model is better than the Common Effect (OLS) method, the Lagrange Multiplier test is used. (Basuki, 2014). If the Breusch-Pagan value is smaller than the tolerance value of 0.05, the right model is REM. However, if the Breusch-Pagan value is greater than 0.05 then the right model is CEM.

The independent variables used are Poverty, Education Funds, and Village Funds, while the dependent variable used is the Human Development Index. The regression equation in this study is:

$$\mathbf{IPMit = \alpha + \beta 1KMit + \beta 2\ Log(DIK)it + \beta 3\ Log(DD)it + \varepsilon it}$$

With:
i : i-th entity
t : tth period
α: constant
βn: regression coefficient
IPM: Human Development Index
KM: Poverty
DIK: Education Expenditure
DD: Village Fund

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εit: error term

RESULTS

Chow Test

The Chow test has been conducted with the results as in Table 1 as follows:

Table 1. Chow Test Results

Redundant Fixed Effects Tests
Equation: Untitled
Test cross-section fixed effects

Effects Test	Statistic	d.f.	Prob.
Cross-section F	29.867930	(4,22)	0.0000
Cross-section Chi-square	55.831722	4	0.0000

The Cross-section Chi-square probability value of 0.0000<0.05 indicating that the FEM model is better applied than the CEM model.

Hausman Test

The Hausman test has been conducted with the results as in Table 2 as follows:

Table 2. Hausman Test Results

Correlated Random Effects - Hausman Test
Equation: Untitled
Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	16.661952	3	0.0008

Cross-section random probability value of 0.0008 <0.05 indicates the FEM model is better applied than the FEM model.

Analysis Result

Based on the Chow Test and Hausman Test, the better panel data regression model applied in this study is the Fixed Effect Model (FEM), and no longer needs to do the Lagrange Multiplier Test. The regression results using the FEM model can be seen in Table 3 as follows:

Table 3. Fixed Effect Model (FEM) Regression Results

Dependent Variable: IPM
Method: Panel Least Squares
Date: 05/26/24 Time: 10:21
Sample: 2018 2023
Periods included: 6
Cross-sections included: 5
Total panel (balanced) observations: 30

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.45556	29.32468	0.356545	0.7248
KM	-0.766802	0.150776	-5.085714	0.0000
LOG(DIK)	0.336846	0.224628	1.499573	0.1479
LOG(DD)	2.343016	1.128685	2.075880	0.0498

Effects Specification

Cross-section fixed (dummy variables)

R-squared	0.952707	Mean dependent var	63.83467
Adjusted R-squared	0.937660	S.D. dependent var	3.134458
S.E. of regression	0.782612	Akaike info criterion	2.570820
Sum squared resid	13.47460	Schwarz criterion	2.944472
Log likelihood	-30.56229	Hannan-Quinn criter.	2.690354
F-statistic	63.31274	Durbin-Watson stat	1.235867
Prob(F-statistic)	0.000000		

Based on Table 3, the panel data regression equation is obtained as follows IPM = 10.45556 - 0.766802 KM + 0.336846 Log (DIK) + 2.343016 Log (DD).

T Test (Partial)

Table 4. T Test Results (Partial)

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	10.45556	29.32468	0.356545	0.7248
KM	-0.766802	0.150776	-5.085714	0.0000
LOG(DIK)	0.336846	0.224628	1.499573	0.1479
LOG(DD)	2.343016	1.128685	2.075880	0.0498

From Table 4. obtained the probability value of the Poverty variable is 0.0000<0.05 with a coefficient value of -0.766802 so it can be concluded that Poverty has a negative and significant impact on the Human Development Index.

The probability value of the Education Expenditure variable is 0.1479>0.05 with a coefficient value of 0.336846, so it can be concluded that Education Expenditure has a positive but insignificant impact on the Human Development Index.

The probability value of the Village Fund variable is 0.0498<0.05 with a coefficient value of 2.343016 so it can be concluded that the Village Fund has a positive and significant impact on the Human Development Index.

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F Test (Simultaneous)

Table 5. F Test Results (Simultaneous)
Effects Specification

Cross-section fixed (dummy variables)			
R-squared	0.952707	Mean dependent var	63.83467
Adjusted R-squared	0.937660	S.D. dependent var	3.134458
S.E. of regression	0.782612	Akaike info criterion	2.570820
Sum squared resid	13.47460	Schwarz criterion	2.944472
Log likelihood	-30.56229	Hannan-Quinn criter.	2.690354
F-statistic	63.31274	Durbin-Watson stat	1.235867
Prob(F-statistic)	0.000000		

Based on Table 5, the F-statistic probability value of 0.000000<0.05, which shows that the variables of Poverty, Education Expenditure, and Village Fund simultaneously have a significant impact on the Human Development Index.

Coefficient of Determination

From Table 5. obtained the Adjusted R-squared coefficient of determination of 0.937660. This shows that the Poverty, Education Expenditure, and Village Fund variables can explain the Human Development Index variable by 93.7660%. The remaining 6.234% is accompanied or explained by other variables that are not included in the object of this study.

The Impact of Poverty on the Human Development Index

Poverty has a negative and significant impact on the Human Development Index in the Nias Islands. This means that if the percentage of poor people increases, the Human Development Index will decrease, and vice versa. This is in line with research conducted (Tarumingkeng et al., 2019), (Hidayati & Imaningsih, 2022), (Saputro, 2022), and other research. From the research results, the Poverty regression coefficient was -0.766802 or -0.77. This shows that if Poverty increases by 1%, the Human Development Index in Nias Islands will decrease by 0.77% and if poverty is reduced by 1%, the Human Development Index in Nias Islands will increase by 0.77%.

Therefore, the Government should strive to reduce the poverty rate in Nias Islands. Among the things that can be done are:

1. Simplify the administration of business licenses to strengthen the business sector;
2. Provide agricultural and plantation counseling to strengthen the economy through the agricultural and plantation sectors;
3. Provide equipment assistance to fishermen to strengthen the fisheries sector because the Nias Islands are surrounded by vast oceans and rich in fish resources;
4. Create policies that maximize the use of local labor in Government projects.

Impact of Education Expenditure on the Human Development Index

Education Expenditure has a positive but insignificant impact on the Human Development Index in Nias Islands. This is in line with research conducted (Harsono et al., 2024). For this reason, the Government should conduct a review so that the education budget in Nias Islands can be further optimized to support better education and the benefits can be felt directly by the people in Nias Islands. Among the policies that can be carried out are:

1. Provide free books to students at school;
2. Provide facilities in the form of teaching aids or laboratories that can improve students' understanding;
3. Providing scholarships to outstanding students to motivate them to improve their educational capacity.

Impact of Village Fund on the Human Development Index

The Village Fund has a positive and significant impact on the Human Development Index in Nias Islands. This result is in line with research (Rimawan & Aryani, 2019), (Suhyanto et al., 2020), and (Syah & Soelistyo, 2022). From the research results, the regression coefficient of the Village Fund is 2.343016 or 2.34. This means that if the absorption of the Village Fund increases by 1%, it will have an impact on increasing the Human Development Index by 2.34%. This shows that development through the smallest unit of government, namely the Village, is very effective to do. The distribution of the Village Fund budget can improve village infrastructure which has an impact on increasing the Community Development Index in the Nias Islands.

Therefore, researchers suggest that the Village Fund distribution program by the Central Government be continued. The program of providing incentives to the Village in the form of additional Village Funds should also be continued to motivate the Village to improve the quality of services to the community and also improve the quality of management and accountability of the Village Fund.

CONCLUSION

The conclusion that can be drawn from the results of this study is that Poverty partially has a negative and significant impact on the Human Development Index in the Nias Islands. For this reason, the government should make programs and policies to alleviate poverty. Education Expenditure partially has a positive but insignificant impact on the Human Development Index in Nias Islands. For this reason, the government should make studies to optimize the use of a more targeted education budget. The Village Fund partially has a positive and significant impact on the Human Development Index in Nias Islands. For this reason, the Government should continue the Village Fund distribution program and the Village Government should optimize the management and accountability of the Village Fund. Poverty, Education Expenditure, and Village Funds simultaneously have a significant impact on the Human Development Index in Nias Islands.

REFERENCES

[1] Basuki, A. T. (2014). Regresi Model PAM, ECM dan Data Panel dengan EVIEWS 7. Katalog Dalam Terbitan (KDT).

[2] BKF. (2018). Kajian Dana Desa: Analisis Empiris Badan Usaha Milik Desa, Kesempatan Kerja, dan Infrastruktur pada Seribu Desa di Indonesia. In Kementerian Keuangan, Badan Kebijakan Fiskal (Vol. 1, Issue 1). https://fiskal.kemenkeu.go.id/files/berita-kajian/file/Kajian_dana_desa.pdf

[3] BPS. (2021). Peraturan Badan Pusat Statistik Nomor 4 Tahun 2021 tentang Standar Data Statistik Nasional. https://ppid.bps.go.id/upload/doc/Peraturan_Badan_Pusat_Statistik_Nomor_4_Tahun_2021_tentang_Standar_Data_Statistik_Nasional_1658133163.pdf

[4] BPS. (2024). Provinsi Sumatera Utara dalam Angka 2024. Badan Pusat Statistik Provinsi Sumatera Utara.

[5] Falianty, T. A. (2019). Teori Ekonomi Makro dan Penerapannya di Indonesia. Rajawali Pers.

[6] Harsono, Harsono, I., Purnama, I., Firmansyah, M., Irwan, M., & Sutanto, H. (2024). The Influence Of Education Expenditure, Health Expenditure And Social Assistance Expenditure On Human Development Index In NTB Province In 2013-2022. Management Studies and Entrepreneurship Journal, 5(1), 802–810. https://doi.org/https://doi.org/10.37385/msej.v5i1.4048

[7] Hidayati, D. R., & Imaningsih, N. (2022). Pengaruh pengeluaran pemerintah sektor pendidikan , kesehatan , pertumbuhan ekonomi dan kemiskinan terhadap indeks pembangunan manusia. Jurnal Ekonomi, Manajemen Dan Akuntansi, 4(4), 703–710. https://doi.org/10.30872/jfor.v24i4.11875

[8] Peraturan Pemerintah Republik Indonesia. (2022). Peraturan Pemerintah Republik Indonesia Nomor 4 Tahun 2022 Tentang Perubahan Atas Peraturan Pemerintah Nomor 57 Tahun 2021 Tentang Standar Nasional Pendidikan. Lembaran Negara Republik Indonesia Nomor 14 Tahun 2022, 082465, 1–16. https://peraturan.bpk.go.id/Home/Details/196151/pp-no-4-tahun-2022

[9] Rimawan, M., & Aryani, F. (2019). Pengaruh Alokasi Dana Desa Terhadap Pertumbuhan Ekonomi, Indeks Pembanguna Manusia Serta Kemiskinan di Kabupaten Bima. Jurnal Ilmiah Akuntansi Dan Humanika, 9(3), 287–295. https://doi.org/https://doi.org/10.23887/jiah.v9i3.22539

[10] Saputro, M. H. (2022). Analisis Pengaruh Tingkat Kemiskinan Terhadap Indeks Pembangunan Manusia (IPM) Dengan Model Regresi Linier (Studi Kasus Di Kabupaten Bengkulu Utara Pada Tahun 2010-2021). EKOMBIS REVIEW: Jurnal Ilmiah Ekonomi Dan Bisnis, 10(2), 809–816. https://doi.org/10.37676/ekombis.v10i2.2647

[11] Simangunsong, S. R., Tanjung, A. A., & Siahaan, S. D. N. (2021). Analisis Dampak Dana Desa dan Produk Domestik Regional Bruto Terhadap Indeks Pembangunan Manusia di Kabupaten Tapanuli Tengah. Journal of Business and Economics Research (JBE), 2(1), 8–12. https://ejurnal.seminar-id.com/index.php/jbe/article/view/516

[12] Suhyanto, O., Juanda, B., Fauzi, A., & Rustiadi, E. (2020). Pengaruh Dana Transfer Dana Desa Dan Pad Terhadap Indeks Pembangunan Manusia Di Provinsi Jawa Barat. EKUITAS (Jurnal Ekonomi Dan Keuangan), 4(3), 285–305. https://doi.org/10.24034/j25485024.y2020.v4.i3.4478

[13] Syah, A. A., & Soelistyo, A. (2022). Pengaruh Alokasi Dana Desa, Pengeluaran Pemerintah Sektor Pendidikan Dan Kesehatan Terhadap Indeks Pembangunan Manusia Di Provinsi Jawa Timur Tahun 2011-2020. Jurnal Ilmu Ekonomi JIE, 6(2), 203–210. https://doi.org/https://doi.org/10.22219/jie.v6i2.20463

[14] Tarumingkeng, W. A., RUMATE, V. A., & Rotinsulu, T. O. (2019). 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

[15] UNDP (United Nations Development Programme). (1990). Human Development Report 1990: Concept and Measurement of Human Development. In New York.

[16] UU RI. (2011). Undang-undang Republik Indonesia Nomor 13 Tahun 2011 tentang Penanganan Fakir Miskin. https://peraturan.bpk.go.id/Details/39223/uu-no-13-tahun-2011

[17] UU RI. (2014). Undang-undang Nomor 6 Tahun 2014 tentang Desa. https://peraturan.bpk.go.id/Details/38582/uu-no-6-tahun-2014