



THE EFFECT OF EDUCATION AND HEALTH PERFORMANCE ON POVERTY IN INDONESIA

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Article history:	Abstract:
Received: 30 th March 2022 Accepted: 28 th April 2022 Published: 11 th June 2022	<p>This study aims to determine how much influence the performance of education and health has on poverty in Indonesia. This research uses quantitative methods. The data used in this study were sourced from the Central Bureau of Statistics and the Regional Basic Data Management Information System (SIMREG) using multiple regression econometric analysis, while the time period chosen in this study was six years (2013-2018).</p> <p>The results of this study indicate that, (i) the average length of schooling has a positive and insignificant correlation with poverty, meaning that every increase in the average length of schooling will increase the poverty rate in Indonesia. (ii) the net participation rate has a negative and significant effect on poverty, meaning that every increase in the net participation rate will reduce the poverty rate in Indonesia. (iii) school enrollment rates are positively and insignificantly correlated with poverty, meaning that every increase in school enrollment rates will increase poverty rates in Indonesia (iv) life expectancy has a negative and significant effect on poverty, meaning that any increase in life expectancy will reduce poverty rates in Indonesia. (v) the number of hospitals has a negative and significant effect on poverty, meaning that every increase in the number of hospitals will reduce the poverty rate in Indonesia. (vi) the number of puskesmas has a negative and significant effect on poverty, meaning that every increase in the number of puskesmas will increase the poverty rate in Indonesia.</p>

Keywords: Poverty, Education, Health

1. INTRODUCTION

In any country in the world, poverty cannot escape the attention of the government. In the economic field, poverty is a reference point for the success of governments in developing countries realizing that it is important to pay attention to the problem of poverty and strive to reduce poverty levels. Indonesia as one of the developing countries realizes that it is important to pay attention to the problem of poverty and make every effort to suppress it in the government's annual agenda. The low level of education and health affects poverty where health is the core of welfare and education is very supportive to achieve life satisfaction and worth. Education is the key in shaping a country's ability to absorb modern technology and to develop capacity for sustainable growth and development. And more generally Health is a requirement in increasing productivity, while the success of Education also lies in good Health. In developing countries the cause of poor health is poverty itself. However, improving education and health can help bring people out of poverty (Todaro & Smith, 2013). In developing countries the cause of poor health is poverty itself. However, improving education and health can help bring people out of poverty (Todaro & Smith, 2013). In developing countries the cause of poor health is poverty itself. However, improving education and health can help bring people out of poverty (Todaro & Smith, 2013).

One of the factors that can affect poverty is health because health is a vulnerable thing faced by the poor, as a result of their economic limitations in an effort to be healthy and meet their individual needs. The level of health affects the welfare of the community and has a close relationship with poverty

The poor are people who spend an average per capita monthly below the poverty line. Can be seen in the following table

Table 1.
Number of poor people in Indonesia by City and Village

Year 2013 - 2018	Number of poor people (million people)		
	CITY	VILLAGE	CITY + VILLAGE
MARCH 2013	10.33	17.74	28.07
SEPTEMBER 2013	10.63	17.92	28.55
MARCH 2014	10.51	17.77	28,28
SEPTEMBER 2014	10.36	17.37	27.73
MARCH 2015	10.65	17.94	28.59
SEPTEMBER 2015	10.62	17.89	28.51
MARCH 2016	10.34	17.67	28.01
SEPTEMBER 2016	10.49	17.28	27.76
MARCH 2017	10.67	17.1	27.77
SEPTEMBER 2017	10.27	16.31	26.58
MARCH 2018	10.14	15.80	25.94
SEPTEMBER 2018	10.13	15.54	25.67

Source: Central Bureau of Statistics 2013-2017

The table above shows that the higher poverty rate is found in villages, judging from the number of poor people between cities and villages. In September 2017 the poor population (million people) at the urban level was 10.27 while for the village 16.31 it showed that the poverty rate in the village was higher.

The relationship between poverty and education can be understood that poverty is an obstacle to educational attainment at the macro and micro levels. At the macro level, poor countries generally have low enrollment rates. At the micro level, children in poor households tend to receive little education.

Investment in education and health will be more meaningful for the poor than for the non-poor, because the main asset is their physical labor. The existence of cheap Education and Health facilities will greatly help increase productivity and thereby increase income. Many poor people systematically experience ignorance. It is therefore important to understand that poverty can lead to ignorance and ignorance is clearly synonymous with poverty (Wijayanto, 2010). Seeing the background above, the researchers are interested in conducting research with the title "The Effect of Education and Health Performance on Poverty in Indonesia"

2.MATERIALS AND METHODS

2.1 Theory Study

2.1.1 Poverty

According to (Ritongga, 2003) poverty is a condition of life that is completely lacking in meeting needs so that they do not feel a decent life. The Central Bureau of Statistics (2010) uses the concept of basic need approach to measure poverty. With this approach, poverty is seen as an economic inability to meet basic food and non-food needs as measured from the expenditure side. In other words, poverty is seen as an economic inability to meet basic food and non-food needs.

The poor are defined as people whose income (approximately expenditure) is less than the income needed to live properly in the area where they live. The need for a decent life is translated as the amount of rupiah that can meet the needs of food consumption equivalent to 2100 calories a day, housing, clothing, health, and education. The amount of rupiah is then referred to as the poverty line.

2.1.2 Education

In the law of the Republic of Indonesia No. 20 of 2003 in chapter 1 article 1 stated that education is a conscious and planned effort to create a learning atmosphere and learning process so that students actively develop their potential to have religious spiritual strength, self-control, personality, intelligence, noble character, and the necessary skills. himself, the people of the nation and the State.

According to Ki Hajar Dewantara, education is all efforts to advance children's character, mind and body, so that they can advance the perfection of life, namely living and reviving children in harmony with nature and society. In general, education is understood in two senses, namely broadly and narrowly. The broad understanding of education is life. Education is all learning experiences that take place in the environment and throughout life. While education is narrowly school. Education is teaching held in schools as formal educational institutions.

2.1.3 Health

Health is one of the basic needs of society, therefore health is a right for every citizen which is protected by the Constitution. The improvement of health services is basically an investment in human resources to achieve a prosperous society (welfare society). The level of public health will greatly affect the level of community welfare,

because the level of health has a close relationship with poverty. Meanwhile, the level of poverty will be related to the level of welfare. Because health is the main factor in the welfare of the community that the government wants to realize, health must be the main concern of the government as a public service provider.

Health is one of the variables of people's welfare that can describe the level of public health in relation to the quality of life. The health condition of the population is one of the capitals for the success of national development because with a healthy population, development is expected to run smoothly.

In Law No. 36 of 2009, health is defined as a healthy state, both physically, mentally, spiritually and socially that allows everyone to live socially and economically productive lives.

3.RESULTS AND DISCUSSION

3.1 Regression Analysis Results

Table 2.
Data Panel Regression Results

Dependent Variable: POV?
Method: Pooled EGLS (Cross-section weights)
Total pool (balanced) observations: 204

Variable	Coefficient	Std. Error	t-Statistics	Prob.
C	91.18647	13.47936	6.764895	0.0000***
RLS?	0.001579	0.005141	0.307091	0.7592NS
APM?	-0.025625	0.012954	-1.978082	0.0496**
APS?	0.006358	0.004924	1.291108	0.1985NS
UHH?	-1.065101	0.209553	-5.082731	0.0000***
JRS?	-0.009194	0.003488	-2.635871	0.0092***
JP?	-0.013952	0.006056	-2.303887	0.0225**
R-squared	0.993282	Durbin-Watson stat		1.574215
Adjusted R-squared	0.991684			
F-statistics	621.7031			
Prob(F-statistic)	0.0000***			

Note: ***) significant at 1% and **) significant at 5% *) Significant at 10% NS (Not Significant)

Source: Processing Results, 2021 (Appendix)

The explanation of the estimated output model above can be described as follows:

- Poverty without being influenced by any independent variables in the research model will be valuable 91.18647 percent
- The average length of schooling has a positive effect on poverty. This means that every 1 percent increase in the average length of schooling will increase poverty by 0.001579 percent.
- The Net Participation Rate has a negative effect on poverty. Thus, every 1 percent increase will reduce poverty by 0.025625 percent
- School Participation Rate has a positive effect on poverty. So it can be explained that an increase of 1 percent will increase poverty by 0.006358 percent.
- Life expectancy has a negative effect on poverty. Thus, every 1 percent increase will reduce poverty by 1.065101 percent.
- The number of hospitals has a negative effect on poverty. Thus, every 1 percent increase will reduce poverty by 0.009194 percent.
- The number of Puskesmas has a negative effect on poverty. Thus, every 1 percent increase will reduce poverty by 0.013952 percent.

Table 3.
Province Regression Coefficient in Indonesia 2013-2018

No	Fixed Effects (Cross)	Coefficient	No	Fixed Effects (Cross)	Coefficient
1	_ACEH_--C	6.334922	18	_NUSA_TENGGARA_WEST_--C	-1.362562
2	_SUMATERA_WEST_--C	-4.344308	19	_NUSA_TENGGARA_TIMUR_--C	6.985174
3	_NORTH SUMATERA_--C	1.461689	20	_KALIMANTAN_WEST_--C	-3.806799
4	_RIAU_--C	-3.750616	21	_CENTRAL KALIMANTAN_--C	-7.243009
5	_JAMBI_--C	-3.787053	22	_KALIMANTAN_SELATAN_--C	-9.419053
6	_SUMATERA_SELATAN_--C	2.337189	23	_KALIMANTAN_TIMUR_--C	-2.097559
7	_BENGKULU_--C	2.556818	24	_NORTH KALIMANTAN_--C	-5.648506
8	_LAMPUNG_--C	2.939807	25	_SULAWESI_NORTH_--C	-3.073135
9	_KEP_BANGKA_BELITUNG_--	-9.414425	26	_SULAWESI_TENGAH_--C	-1.391304

C					
10	_KEP_RIAU_--C	-8.406291	27	_SULAWESI_SELATAN_--C	1.115912
11	_DKI_JAKARTA_--C	-2.498045	28	_SULAWESI_TENGGARA_--C	1.949844
12	_JAVA_WEST_--C	13.70586	29	_GORONTALO_--C	0.279976
13	_JAVA_TENGAH_--C	16.59768	30	_SULAWESI_WEST_--C	-8.653133
14	_DI_YOGYAKARTA_--C	5.528631	31	_MALUKU_--C	1.328333
15	_JAVA_TIMUR_--C	14.16715	32	_MALUKU_NORTH_--C	-9.247961
16	_BANTEN_--C	-6.175703	33	_PAPUA_WEST_--C	6.633066
17	_BALI_--C	-6.987863	34	_PAPUA_--C	13.38527

Source: Processing Results, 2021 (Appendix)

Based on the fixed effect mode estimate, from 34 provinces in Indonesia, the regions that experienced positive growth were Central Java, East Java, West Java, Papua, East Nusa Tenggara, West Papua, Aceh, DI Yogyakarta, Lampung, Bengkulu, Sulawesi. South, Southeast Sulawesi, North Sumatra, Maluku, South Sulawesi and Gorontalo Province. Meanwhile, the provinces that have a negative influence on poverty are South Kalimantan, Kep. Bangka Belitung, North Maluku, West Sulawesi, Kep. Riau, Central Kalimantan, Bali, Banten, North Kalimantan, West Sumatra, West Kalimantan, Jambi, Riau, North Sulawesi, DKI Jakarta East Kalimantan, Central Sulawesi and West Nusa Tenggara Province.

3.2 Simultaneous Testing (F-Test)

In addition, further testing is intended to analyze the suitability of the model, the f-test statistic is designed to draw conclusions whether the exogenous variables included in the model can describe a linear relationship with endogenous variables. In the previous test, it was known that the value of the f-statistic was 621.7031 while the value of the statistical probability f is smaller than all the significant levels used in the model, which is significant at the 1% level. Thus it can be stated that the exogenous variables together can describe the variables in the study.

3.3 Partial Testing (t-test)

The last test in this study was designed to determine the effect given by the independent variable on the non-independent variable and how much it can be stated by the variable. The value of the t-test is in Table 2 and focuses more on comparing the coefficients of the independent variables and the value of the probability. Based on Table 2 previously explained that:

a. The Effect of Average Years of Schooling on Poverty in Indonesia During the 2013-2018 Period

From the results of the analysis that has been carried out, it is known that the p-value for the variable Average Length of School is 0.7592. If the p-value is compared with all levels used in the study, the mean length of schooling is not significant so H0 is accepted. Thus, it can be concluded that the average length of schooling has no significant effect on poverty in Indonesia during 2013-2018.

b. The Effect of Net Enrollment Rate on Poverty in Indonesia During the 2013-2018 Period.

From the results of the analysis that has been carried out, it is known that the p-value for the Pure Participation Rate variable is 0.0496. If the p-value is compared with the significance level α 5% then the p-value obtained is still smaller than α 5% so that H0 is rejected. Thus, it can be concluded that the net enrollment rate has a significant effect on poverty during 2013-2018.

c. The Effect of School Enrollment Rates on Poverty in Indonesia During the 2013-2018 Period.

From the results of the analysis that has been carried out, it is known that the p-value for the variable School Participation Rate is 0.1985. If the p-value is compared with all levels used in the study, the School Participation Rate is not significant so H0 is accepted. Thus it can be concluded that the School Enrollment Rate has no significant effect on Poverty during 2013-2018.

d. The Effect of Life Expectancy on Poverty in Indonesia During the 2013-2018 Period.

From the results of the analysis that has been carried out, it is known that the p-value for the Life Expectancy Variable is 0.0000. If the p-value is compared with the significance level α 1% then the p-value obtained is still smaller than α 1% so that H0 is rejected. Thus it can be concluded that Life Expectancy has a significant effect on Poverty during 2013-2018.

e. The Effect of the Number of Hospitals on Poverty in Indonesia During the 2013-2018 Period.

From the results of the analysis that has been carried out, it is known that the p-value for the Life Expectancy Variable is 0.0000. If the p-value is compared with the significance level α 1% then the p-value obtained is still smaller than α 1% so that H0 is rejected. Thus it can be concluded that Life Expectancy has a significant effect on Poverty during 2013-2018.

f. The Effect of the Number of Health Centers on Poverty in Indonesia During the 2013-2018 Period.

From the results of the analysis that has been carried out, it is known that the p-value for the Number of Community Health Centers is 0.0000. If the p-value is compared with the significance level α 1% then the p-value obtained is still smaller than α 1% so that H0 is rejected. Thus it can be concluded that the number of Puskesmas has a significant effect on poverty during 2013-2018

3.4 Classical Assumption Test:

Multicollinearity Test

Model VIF memperhitungkan nilai dari Tolerance VIF jika nilai dari VIF < 10 maka dapat dijelaskan tidak terdapat gejala multikolinearitas dalam model, adapun $VIF \geq 10 \leq 30$ maka terdapat gejala multikolinearitas rendah, sedangkan apabila nilai dari $VIF > 30$ maka dapat di simpulkan bahwa terjadi masalah multikolinearitas tinggi.

Tabel 4.
Multikolnearitas VIF-Test

Variance Inflation Factors
Included observations: 204

Variable	Coefficient Variance	Uncentered VIF	Centered VIF
C	181.6932	265790.9	NA
RLS	2.64E-05	4.080582	1.040580
APM	0.000168	1385.138	1.465422
APS	2.42E-05	291.6897	1.068937
UHH	0.043912	308652.9	2.476965
JRS	1.22E-05	103.5669	1.862156
JP	3.67E-05	4451.997	1.398220

Sumber: Hasil Pengolahan, 2021 (Lampiran)

Hasil Pengujian diatas menunjukkan bahwa nilai Centered VIF ketiga variabel independen krang dari sepuluh ($VIV < 10$), sehingga dalam model tidak terjadi gejala multikolinearitas antara variabel bebasnya.

Heterocedasticity Test

Berikut hasil pengujian asumsi non Heteroskedastisitas menggunakan Uji Glejser:

Tabel 5.
Heterokedastisitas-Test

Dependent Variable: RESABS
Method: Panel Least Squares
Total panel (balanced) observations: 204

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.974228	0.812903	1.198457	0.2322NS
RLS	0.002107	0.003994	0.527477	0.5985NS
APM	-0.011211	0.003777	-2.967914	0.0134NS
APS	0.005249	0.002965	1.770592	0.0782NS
UHH	-0.003545	0.012142	-0.291920	0.7707NS
JRS	-0.000444	0.000682	-0.650399	0.5162NS
JP	0.000224	0.000236	0.949523	0.3435NS

Keterangan : ***) signifikan di 1% dan **) signifikan di 5% *) Signifikan 10% NS (Tidak Signifikan)

Source: Processing Results, 2021 (Appendix)

The results of the Heteroscedasticity-test in the table above show that the independent variables in the study gave a value greater than alpha or the level of confidence used in the study (10%, 5% and 1%). This means that it can be explained that in the estimation of the research model there is no heteroscedasticity problem.

Autocorrelation Test

It is known that the number of observation data or the number of data is $N = 204$ and the number of confounding variables or the value of $K = 6$. So in the DW table the value of $Du = 1.78646$ and the value of $DL = 1.66437$, while the value of DW in the model estimation above is 1.550812. This means that it can be explained that the regression estimation of the previous model is negatively correlated, because the value of DW is between $4-dl < dw < 4$ and it can be concluded that there is no negative autocorrelation symptom.

4. CONCLUSION

Based on the results of the analysis and discussion related to the Effect of Education and Health Performance on Poverty in Indonesia, it can be concluded that:

1. Average Length of Schooling has a positive and insignificant correlation with Poverty during the 2013-2018 period. This means that every increase in the average length of schooling will increase poverty, but it cannot be clearly explained that the increase in RLS leads to an increase in poverty. This is because the average length of schooling in each province is different, so that human resources (HR) in the scope of quality are not evenly distributed so that RLS is unable to explain the increase in poverty.
2. The net enrollment rate (NER) has a negative and significant effect on poverty in Indonesia during the 2013-2018 period. This means that every increase in the Net Participation Rate will reduce poverty in Indonesia.

3. The School Enrollment Rate is positively and not significantly correlated with poverty in Indonesia during the 2013-2018 time period. This means that every increase in the School Participation Rate will increase poverty, but the School Participation Rate cannot clearly explain the increase in poverty.
4. Life Expectancy has a negative and significant effect on poverty in Indonesia during the period 2013-2018. This means that every increase in Life Expectancy will reduce poverty in Indonesia.
5. The number of hospitals has a negative and significant effect on poverty in Indonesia during the period 2013-2018. This means that every increase in the number of hospitals will reduce poverty in Indonesia.
6. The number of Puskesmas has a negative and significant effect on poverty in Indonesia during the 2013-2018 time period. This means that every increase in the number of Puskesmas will increase poverty in Indonesia.

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