

Effect of Unemployment Rate, Education on Human Development Index which is Mediated by Poverty.



Julian Maharani¹, Indah Yuliana²

^{1,2}Master of Islamic Economics Postgraduated Program, State Islamic University of Maulana Malik Ibrahim, Malang, Indonesia

ABSTRACT: The human development index can measure the welfare of human resources; therefore the quality of human resources is the most important factor that greatly influences the process and determines the success of development. The purpose of this study was to determine the effect of education on poverty, the effect of unemployment on poverty, the effect of poverty on the human development index, the effect of education on the human development index mediated by poverty, the effect of unemployment on the human development index mediated by poverty. This study uses a quantitative approach with path analysis. The data used is secondary data taken from 2017-2021. The results of this study indicate that the level of unemployment and education have a significant positive effect on the human development index in South Sumatra Province. Poverty has a significant negative effect on the human development index in South Sumatra Province. The unemployment rate and education have a significant positive effect on the human development index which is mediated by the poverty variable.

KEYWORDS: human development index, poverty, education, unemployment.

I. INTRODUCTION

Each region has its own track record which proves that these regions have made progress in reforming for the better, one of which is through careful development planning so that the vision and mission of an area is achieved. Whether or not the development planning is going well can be seen from the Human Development Index figures (Syofya, 2018). The human development index can measure the welfare of human resources; therefore the quality of human resources is the most important factor that greatly influences the process and determines the success of development (Febrianti & Wenagama, 2022).

In increasing the Human Development Index, the government has an important role, one of which is by means of public sector government spending in the form of capital assistance in the form of cash that can be used properly for the poor to start new businesses in fulfilling their daily lives so as to reduce the poverty rate. and the unemployment rate (Kasnelly & Wardiah, 2021). It can also be used in the education sector so that people get the best education but can also be reached by the lower middle class, so this can increase literacy rates (Febrianti & Wenagama, 2022).

Indonesia is in fourth place in the HDI ranking in ASEAN. The HDI rate in Indonesia has increased every year but in 33 provinces in Indonesia the HDI percentage is not evenly distributed, the difference is quite large between the provinces in the West, East, South and North (Kiha, Seran & Lau, 2021). Based on the BPS of South Sumatra Province from 2017-2021 it shows that each Regency/City of South Sumatra has a varying HDI percentage. Penungkal Abab Lematang Ilir Regency is the district that has the lowest HDI out of 17 districts/cities in South Sumatra with a rate of 64.88% in 2021, while Palembang City is the city that has the highest HDI with a rate of 78.72% in 2021. This happens because Palembang City is the Capital City of South Sumatra Province, where in terms of the availability of complete facilities both in terms of education, health and development it is classified as very adequate compared to other Regencies/Cities in this South Sumatra Province.

Whether or not the number of job choices that suit a person's base is influenced by the level of education, the lower the level of education of a person, the choice of work becomes limited. Education can also increase a person's knowledge and ability to increase their work productivity (Susanto et al., 2017). By increasing one's skills and knowledge, it can improve the quality of human resources which can encourage success and success so that unemployment will not occur (N.Dewi et al., 2017). An unemployed person will certainly depend on other people who are more productive so that the per capita income rate decreases which can cause poverty and other social problems (Prasetyoningrum & Sukmawati, 2018).

Given the importance of the influence of education, unemployment, and poverty on the Human Development Index

Effect of Unemployment Rate, Education on Human Development Index which is Mediated by Poverty.

(HDI) in South Sumatra Province, the authors are interested in conducting research with the title "Effects of Education, Unemployment on Poverty-Mediated Human Development Index in South Sumatra Province". The purpose of this study was to determine the effect of education on poverty, the effect of unemployment on poverty, the effect of poverty on HDI, the effect of education on HDI mediated by poverty, the effect of unemployment on HDI mediated by poverty.

2023

II. LITERATURE REVIEW

Unemployment Rate

The Unemployment Rate is the percentage of the number of unemployed people from the total labor force. Unemployment can be defined as a person or resident who is looking for a job that generates income or can be called someone who does not have a job and income (Yacoub, 2012). According to BPS, open unemployment consists of: 1) Residents who are looking for work. 2) Residents who are preparing for business. 3) Residents who feel it is impossible to get a job. 4) Residents who already have a job. Unemployment problems like this occur because of the fast rate of growth in the labor force while employment growth is relatively slow and unemployment can affect poverty in various ways (Margareni, Djayastra & Yasa, 2016).

H1: Effect of the unemployment rate on poverty

H2: The effect of the unemployment rate on the human development index

Education

Education is the main point for building the nation's future and making a nation of good quality (Rahman & Alamsyah, 2019). In addition, education can also make a person's work productivity better so as to provide greater income (Susanto, Rochaida & Ulfah, 2017). Education is also a planned effort so that individuals actively develop their potential so that they are ready to enter the world of work so as not to be unemployed (Mahsunah, 2013).

H3: Effect of education on poverty

H4: The effect of education on the human development index

Poverty

Poverty is someone who does not have the ability to meet minimum standards of food and non-food needs and is only able to meet his food needs of less than 2100 calories per capita per day (bps.co.id). This makes a person unable to enjoy all kinds of choices and opportunities in fulfilling his basic needs (Wiguna & Sakti, 2013). Poverty is not only experienced by a person, even the State can also experience poverty which causes discomfort in life, threatens the enforcement of rights and justice, loss of generations, and the bleak future of the nation and state (Susanto, Rochaida & Ulfah, 2017). H5 : The effect of poverty on the human development index

Human Development Index

HDI is an index built with three basic approaches, namely knowledge, a decent life, long and healthy life (Tumbuan, Rorong & Tumangkeng, 2023). The HDI value can explain how successful a region is in terms of achieving its predetermined goals or objectives. If this value is close to 100, it is closer to success in achieving its goals and objectives (Alfahera & Muchtolifah, 2023).

H6: Effect of the unemployment rate on the human development index mediated by poverty H7 : Effect of education on the human development index mediated by poverty

III. RESEARCH METHOD

This study uses a quantitative approach, namely research that emphasizes testing theories of measurement of research variables with numbers and requires data analysis with statistical procedures. The measurement tool for this research is data obtained from the Central Bureau of Statistics of South Sumatra Province. In this study using a path analysis model because between the independent variables and the dependent variable there is mediation that affects and unemployment as the independent variable, the Human Development Index as the dependent variable, and poverty as a variable (intervening).

In this study the population used is Regency or City Government in the province of South Sumatra in 2017-2021. The sample was used by researchers in 1 (one) province consisting of 17 (seventeen) cities/regencies in the 2017-2021 period.

Effect of Unemployment Rate, Education on Human Development Index which is Mediated by Poverty.

IV. RESULT AND DISCUSSION

Descriptive Statistics Test

Table 4.1 Descriptive Statistical Test Results

Descriptive Statistics					
	N	Minimum	Maximum	Means	std. Deviation
Education	90	13.74	44.51	25.5669	6.92632
Unemployment	90	1.64	8.90	4.1754	1.38646
Poverty	90	8.77	20.11	13.1074	2.43963
IPM	90	62.58	78.72	68.3549	3.74156
Valid N (listwise)	90				

Based on the results of the Descriptive Test above, it can be described that the distribution of the data obtained by the researcher is:

1. Education Variable (X1), from these data it can be described that the minimum value is 13.74 while the maximum is 44.51. The average value of education is 25.5669 and the standard deviation of education data is 6.92632.
2. Unemployment variable (X2), from these data it can be described that the minimum value is 1.64 while the maximum is 8.90. The average value of unemployment is 4.1754 and the standard deviation of the data for unemployment is 1.38646.
3. Poverty (Y), from these data, it can be described that the minimum value is 8.77 while the maximum is 20.11. The average value of Poverty is 13.1074 and the standard deviation of the Poverty data is 2.43963.
4. HDI variable (Z), from these data it can be described that the minimum value is 62.58 while the maximum is 78.72. The average value of HDI is 68.3549 and the standard deviation of education data is 3.74156.

Normality Test

Table 4.2 Kolmogorov-Smirnov Test Results

One-Sample Kolmogorov-Smirnov Test		
		Unstandardize d Residuals
N		90
Normal Parameters ^{a,b}	Means	.0000000
	std. Deviation	1.83222359 055
Most Extreme Differences	absolute	.046
	Positive	
	Negative	.055 055
Test Statistics		
asymp. Sig. (2-tailed)		.200 ^{c,d}

- a. Test distribution is Normal.
- b. Calculated from data.
- c. Lilliefors Significance Correction.
- d. This is a lower bound of true significance.

Based on the output, the Asymp value can be seen. Sig. (2-tailed) of 0.200 > 0.05, it can be said that the data is normally distributed.

Multicollinearity Test

Table 4.3 Multicollinearity Test Results

Coefficients ^a							
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
	B	std. Error	Betas			tolerance	VIF
1 (Constant)	59,669	1,558		38,303	.000		
Education	.339	.037	.627	9,160	.000	.595	1,682
Unemployment	.767	.175	.284	4,374	.000	.660	1,514
Poverty	-.243	.087	-.158	-2,777	.007	.859	1,164

a. Dependent Variable: HDI

Effect of Unemployment Rate, Education on Human Development Index which is Mediated by Poverty.

Whether or not multicollinearity occurs can be seen from the tolerance and VIF values. If the tolerance value is < 0.1 and $VIF > 10$, then the data experiences multicollinearity. Based on the output results that have been tested, it can be seen that the tolerance values for all variables are > 0.1 and the VIF values for all variables are < 10 , so the data does not experience multicollinearity.

Heteroscedasticity Test

Table 4.4 Heteroscedasticity Test Results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	std. Error	Betas	t	
1 (Constant)	1.109	.879		1,262	.210
Education	.011	.021	.072	.520	.605
Unemployment	-.080	.099	-.107	-.811	.419
Poverty	.034	.049	.080	.694	.489

a. Dependent Variable: Abs_Res2

Heteroscedasticity can be through the Glesdjer test which looks at the significance value of each variable. If the significance value is > 0.05 , it is said that there is no heteroscedasticity. Based on the output results that have been tested, it can be seen that the significance value of all variables is > 0.05 , which means that the data does not experience heteroscedasticity.

Autocorrelation Test

Table 4.5 Autocorrelation Test Results

Summary Model ^b					
Model	R	R Square	Adjusted R Square	std. Error of the Estimate	Durbin-Watson
1	.872 ^a	.760	.752	1.86391	2,200

a. Predictors: (Constant), Poverty, Unemployment, Education

b. Dependent Variable: HDI

The formula says that it is free from autocorrelation if it meets the conditions: $dU < DW < 4-dU$.

With a sample of $n = 90$, it can be seen that the dU value is 1.7264 and from the output results there is a DW value of 2.200. Then the value is $1.7264 < 2.200 < 2.2736$, which means that the data is not autocorrelated.

MULTIPLE REGRESSION ANALYSIS

Model 1 Path Coefficient

Table 4.6 Coefficient results with poverty as the dependent variable

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	std. Error	Betas	t	
1 (Constant)	15,374	.968		15,875	.000
Education	-.159	.042	-.451	-3,774	.000
Unemployment	.430	.210	.244	2044	.044

a. Dependent Variable: Poverty

From the output results it can be seen that the significant values of the two variables, namely Education (X_1) = 0.000 and Unemployment (X_2) = 0.044 are less than 0.05. These results state that the regression model 1, namely variables X_1 and X_2 has a significant effect on Y.

Effect of Unemployment Rate, Education on Human Development Index which is Mediated by Poverty.

Table 4.7 Results of the Summary Model with poverty as the dependent variable

Summary models				
Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.375 ^a	.141	.121	2.28731

a. Predictors: (Constant), Unemployment, Education

The R square value contained in the table is 0.141, this indicates that the contribution of X1 and X2 to Y is 14.1% while the remaining 85.9% is contributed by other variables not included in the study. Meanwhile, the value of e1 can be found using the formula $e1 = \sqrt{(1 - 0,141)} = 0.9258$

Model 2 Path Coefficient

Table 4.8 Coefficient results with HDI as the dependent variable

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	std. Error	Betas	t	
1 (Constant)	59,669	1,558		38,303	.000
Education	.339	.037	.627	9,160	.000
Unemployment	.767	.175	.284	4,374	.000
Poverty	-.243	.087	-.158	-2,777	.007

a. Dependent Variable: HDI

From the output results it can be seen that the significant values of the three variables namely Education (X1) = 0.000 and Unemployment (X2) = 0.000 and Poverty (Y) is less than 0.05. These results state that the regression model 1, namely variables X1, X2 and Y has a significant effect on Z.

Table 4.9 Results of the Summary Model with HDI as the dependent variable

Summary models				
Model	R	R Square	Adjusted R Square	std. Error of the Estimate
1	.872 ^a	.760	.752	1.86391

a. Predictors: (Constant), Poverty, Unemployment, Education

The R square value contained in the table is 0.760, this indicates that the contribution of X1, X2 and Y to Z is 76% while the remaining 24% is contributed by other variables not included in the study. Meanwhile, the value of e1 can be found using the formula $e1 = \sqrt{(1 - 0,760)} = 0.4898$

HYPOTHESIS TESTING AND CONCLUDING STAGES

1. Analysis of the effect of X1 on Y: from the analysis it is obtained that a significant value of X1 is 0.000 < 0.05. So it can be concluded that there is a direct significant effect of X1 on Y.
2. Analysis of the effect of X2 on Y: from the analysis it is obtained that a significant value of X2 is 0.044 < 0.05. So it can be concluded that there is a direct significant effect of X2 on Y.
3. Analysis of the effect of X1 on Z: from the analysis it is obtained that a significant value of X1 is 0.000 < 0.05. So it can be concluded that there is a direct significant effect of X1 on Z.
4. Analysis of the effect of X2 on Z: from the analysis it is obtained that a significant value of X2 is 0.000 < 0.05. So it can be concluded that there is a direct significant effect of X2 on Z.
5. Analysis of the effect of Y on Z: from the analysis it is obtained that a significant value of Y is 0.007 < 0.005. So it can be concluded that there is a direct significant effect of Y on Z.
6. Analysis of the effect of X1 through Y on Z: it is known that the direct effect X1 has on Z is 0.627. Meanwhile, the indirect effect of X1 through Y on Z is the multiplication of the beta value of X1 on Y and the beta value of Y on Z, namely: $-0.451 \times -0.158 =$

Effect of Unemployment Rate, Education on Human Development Index which is Mediated by Poverty.

0.071. So, the total effect that X1 has on Z is the direct effect plus the indirect effect, namely: $0.627 + 0.071 = 0.698$. Based on the calculation results, it is known that the value of the direct effect is 0.627 and the indirect effect is 0.698, which means that the value of the indirect effect is greater than the value of the direct effect. These results indicate that indirectly X1 through Y has a significant influence on Z.

7. Analysis of the effect of X2 through Y on Z: it is known that the direct effect that X2 has on Z is 0.284. Meanwhile, the indirect effect of X2 through Y on Z is the multiplication of the beta value of X2 on Y and the beta value of Y on Z, namely:

$0.244 \times -0.158 = -0.038$. Then the total effect that X1 has on Z is the direct effect plus the indirect effect, namely: $0.284 - 0.038 = 0.246$. Based on the calculation results, it is known that the value of the direct effect is 0.284 and the indirect effect is 0.246, which means that the value of the indirect effect is greater than the value of the direct effect. These results indicate that indirectly X1 through Y has a significant influence on Z.

T Test

Table 4.10 T test results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients		Sig.
	B	std. Error	Betas	t	
1 (Constant)	59,669	1,558		38,303	.000
Education	.339	.037	.627	9,160	.000
Unemployment	.767	.175	.284	4,374	.000
Poverty	-.243	.087	-.158	-2,777	.007

a. Dependent Variable: HDI

Based on the output results:

1. The Education Variable has a sig value. $0.000 < 0.05$. Then H_0 is rejected and H_a is accepted, which means that there is a significant influence of education on the human development index.
2. Unemployment variable has a sig value. $0.000 < 0.05$. Then H_0 is rejected and H_a is accepted, which means that there is a significant effect of unemployment on the human development index.
3. The Poverty variable has a sig value. $0.007 < 0.05$. Then H_0 is rejected and H_a is accepted, which means that there is a significant influence of poverty on the human development index.

F Test

Table 4.11 F Test Results

ANOVA ^a					
Model	Sum of Squares	df	MeanSquare	F	Sig.
1 Regression	947,161	3	315,720	90,877	.000 ^b
residual	298,777	86	3,474		
Total	1245,938	89			

a. Dependent Variable: HDI

b. Predictors: (Constant), Poverty, Unemployment, Education

From these results it can be seen the value of sig. for education (X1) unemployment (X2) and poverty (Y) to the human development index (Z) is $0.000 < 0.05$. This proves that H_0 is rejected, and H_a is accepted, meaning that there is a significant effect of education (X1), unemployment (X2) and poverty (Y) on the human development index (Z).

The unemployment rate for poverty is 0.044, less than 0.05, which means it is positively significant. This means that there is an influence of the unemployment rate on poverty, the higher the unemployment rate, the higher the poverty rate will also be.

Education on poverty is 0.000 less than 0.05 which means it is negatively significant. This means that there is an influence of education on poverty, the higher the education level, the lower the poverty rate.

Effect of Unemployment Rate, Education on Human Development Index which is Mediated by Poverty.

Poverty to the human development index is 0.007 less than 0.05 which means it is negatively significant. This means that there is an influence of poverty on the human development index, the higher the poverty rate, the lower the human development index number.

The unemployment rate on the human development index is 0.000, less than 0.05, which means it is positively significant. This means that there is an influence of the unemployment rate on poverty, the higher the unemployment rate, the higher the human development index will also increase.

Education on the human user index is 0.000, less than 0.05, which means it is positively significant. This means that there is an influence of education on the human development index, the higher the education number, the higher the human development index number.

The unemployment rate on the human development index mediated by poverty is 0.698, which means it has a significant positive influence. That is, the poverty variable as a mediating variable affects the level of the influence of the unemployment rate on the human development index.

Education on the human development index mediated by poverty has a value of 0.246 which means it has a significant positive influence. That is, the poverty variable as a mediating variable affects the level of the influence of education on the human development index.

CONCLUSIONS

Based on the data that has been analyzed it can be concluded that, among others; Unemployment rate has a significant negative effect on poverty in South Sumatra Province. Education has a significant positive effect on poverty in South Sumatra Province. The unemployment rate and education have a significant positive effect on the human development index in South Sumatra Province. Poverty has a significant negative effect on the human development index in South Sumatra Province. The unemployment rate and education have a significant positive effect on the human development index which is mediated by the poverty variable.

The government should pay special attention to the education of its people because the level of education has a big impact on the level of the human development index. Unemployment, education, and poverty rates are a unit that plays an important role in increasing the human development index, therefore the government should provide policies to overcome them by taking into account these three variables. The research uses a few variables, therefore for further research it will be better if it adds the period and other variables that support it to achieve the objectives of this research and cover it more broadly.

REFERENCES

- 1) EMILIA KHRISTINA KHA, SIRILUS SERAN, & HENDRIANA TRIFONIA LAU. (2021). PENGARUH JUMLAH PENDUDUK, PENGANGGURAN, DAN KEMISKINAN TERHADAP INDEKS PEMBANGUNAN MANUSIA (IPM) DI KABUPATEN BELU. JURNAL EKONOMI, SOSIAL & HUMANIORA, 2(07), 60-84.
- 2) Febrianti, U., & Wenagama, I. (2022). PENGARUH KEMISKINAN, TINGKAT PENGANGGURAN DAN TINGKAT PENDIDIKAN TERHADAP IPM DI KABUPATEN/KOTA PROVINSI BALI 2014-2019. E-Jurnal Ekonomi Pembangunan Universitas Udayana, 11(5), 1621 - 1645.
- 3) Imelda Rama Alfahera, & Muchtolifah. (2023). PENGARUH KEMISKINAN, PERTUMBUHAN EKONOMI DAN PENDIDIKAN TERHADAP INDEKS PEMBANGUNAN MANUSIA (IPM) KABUPATEN BOJONEGORO. JURNAL RANDAI, 3(2), 1–11.
- 4) Junnatin Wardiah, Sri Kasnelly,. 2021. "Pengaruh Tingkat Pengangguran Dan Tingkat Kemiskinan Terhadap Indeks Pembangunan Manusia Di Indonesia". Al-Mizan : Jurnal Ekonomi Syariah 4 (II).
- 5) MAHSUNAH, D. (2013). ANALISIS PENGARUH JUMLAH PENDUDUK, PENDIDIKAN DAN PENGANGGURAN TERHADAP KEMISKINAN DI JAWA TIMUR. Jurnal Pendidikan Ekonomi (JUPE), 1(3)
- 6) Prasetyoningrum, Ari.K & U. Sulia Sukmawati. (2018). Analisis Pengaruh Indeks Pembangunan Manusia (IPM), Pertumbuhan Ekonomi dan Pengangguran Terhadap Kemiskinan di Indonesia. Equilibrium Jurnal Ekonomi Syariah 6(2):217
- 7) PURNAMA MARGARENI, Ni Putu Ayu; DJAYASTRA, I Ketut; MURJANA YASA, I.G.W.. (2016). FAKTOR-FAKTOR YANG MEMPENGARUHI KEMISKINAN DI PROVINSI BALI. PIRAMIDA, [S.l.], 12(2)
- 8) Rahman, Abdul & Muh. Fiqram Alamsyah. (2019). Pengaruh Pendidikan, Pendapatan dan Konsumsi Terhadap Kemiskinan Masyarakat Migran Di Kota Makassar. Jurnal Ecces (6)1, 111-129
- 9) Susanto, Edyson. Eny Rochaida & Yana Ulfah. (2017). Pengaruh inflasi dan pendidikan terhadap pengangguran dan kemiskinan. INOVASI. 13(1), 19-27
- 10) Syofya, Heppi. (2018). PENGARUH TINGKAT KEMISKINAN DAN PERTUMBUHAN EKONOMI TERHADAP INDEKS PEMBANGUNAN MANUSIA INDONESIA. Jurnal Ilmiah Ekonomi dan Bisnis, 15(2), 177-185

Effect of Unemployment Rate, Education on Human Development Index which is Mediated by Poverty.

- 11) Tumbuan, Claudia C.G., Ita Pingkan F.R. & Steeva Y.L.T. (2023). PENGARUH BELANJA MODAL, PENDIDIKAN DAN PENGANGGURAN TERHADAP INDEKS PEMBANGUNAN MANUSIA DI KOTA MANADO. Jurnal Berkala Ilmiah Efisiensi. 23(2)
- 12) Wiguna, Van Indra., Rachmad Kresna Sakti. (2013). ANALISIS PENGARUH PDRB, PENDIDIKAN, DAN PENGANGGURAN TERHADAP KEMISKINAN DI PROVINSI JAWA TENGAH TAHUN 2005-2010. Jurnal Ilmiah Mahasiswa Fakultas Ekonomi dan Bisnis. 1(2)
- 13) www.bps.co.id
- 14) Yacoub, Yarlina. (2012). Pengaruh Tingkat Pengangguran terhadap Tingkat Kemiskinan Kabupaten/Kota di Provinsi Kalimantan Barat. Jurnal Eksos, 8(3), 176 – 185



There is an Open Access article, distributed under the term of the Creative Commons Attribution – Non Commercial 4.0 International (CC BY-NC 4.0) (<https://creativecommons.org/licenses/by-nc/4.0/>), which permits remixing, adapting and building upon the work for non-commercial use, provided the original work is properly cited.