THE EFFECT OF UNEMPLOYMENT, ECONOMIC GROWTH, LEVEL OF EDUCATION ON THE HUMAN DEVELOPMENT INDEX WITH POVERTY AS MEDIATION

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Abstract

The Human Development Index is an internationally agreed indicator of the success of a region of a country to assess the quality of human development in terms of its impact on health, education, and people's standard of living. This study aims to examine the factors of the unemployment rate, economic growth, education level, and poverty rate on the human development index in 33 Indonesian provinces in 2011-2020 using secondary data sourced from the Central Statistics Agency (BPS). The method used is path analysis which is processed using the SmartPLS3 application. The results of this study indicate that the unemployment rate, economic growth, education level, and poverty rate directly have a significant effect on the human development index. Whereas in the indirect relationship the poverty variable can only mediate between the level of education and the human development index.

Keyword: Unemployment Rate, Economic Growth, Education, Poverty, and Human Development Index

1. INTRODUCTION

At the opening of the 1945 Constitution of the Republic of Indonesia, the main goal of the Indonesian nation is to promote public welfare and educate the nation's life. As one of the main goals, all policies and activities proposed by the government, both regional and central, must have the same goal: to improve people's living standards. Improving community welfare is the core of national development, the level of community welfare reflects the quality of family life.

The development paradigm that is currently developing is the development of human resources which is seen from the quality of human life in each country. The Millennium Development Goals (MDGs) are a global development paradigm that has been agreed internationally by 189 member countries of the United Nations (UN). The Millennium Development Goals place human development as the main focus of development, so that the value of the Human Development Index (HDI) or Human Development Index becomes an indicator of the success of a region of a country. The Human Development Index is also used to assess the quality of human development in terms of its impact on health, education and people's standard of living. According to the Central Statistics Agency (2015), human development is a development process that aims to have more choices, especially income, health and education. (Wahyuningrum & Soesilowati, 2021).

Therefore, a developing government certainly needs good human resources (HR) as capital to carry out Indonesia's development process. For the government, the human development index (IPM) is strategic data because it is used as a performance measure and is used as a way of monitoring areas that need attention or encouragement to achieve development goals (Setyowati & Ediyono, 2021). The human development index is a reflection of human

development achievements in the long term, on the other hand the human development index as an indicator of development does not only measure economic results in the short term, but also the human development index (IPM). explains how citizens can access development results for income, education, health and others (BPS, 2020).

Every province in Indonesia continues to strive to improve its human development index, but one of the obstacles is the human development index which varies greatly between several provinces in Indonesia. Papua Province has the lowest percentage of the Human Development Index in Indonesia in 2020 of 60.44% and DKI Jakarta has the highest percentage of the Human Development Index in Indonesia in 2020 of 80.77% (BPS, 2021). Based on this, in the process of human development internally and externally there must be a balanced policy with an increase in human resources so that it has a positive impact on the development process so that it can increase economic growth, education levels. reduce the unemployment rate and reduce the poverty rate.

One of the main targets in the development process is to increase economic growth because it is closely related to the increase in the price of goods and services produced by the people of Indonesia. When production continues to increase, the welfare of society and human resources will also increase. Economic growth is a condition for meeting basic needs and improving the quality of human life (Ezkirianto & Alexandri, 2018). From several studies on the effect of economic growth on human development, contradictions are still found between the research results. In research (Feriyanto 2017) and (Wahyuningrum & Soesilowati, 2021)the results show that economic growth has no significant effect on the human development index. In contrast to research (Emara and Mohamed 2021) which shows that economic growth has a negative and significant effect on the human development index. And also from research conducted by (Korle et al. 2020) shows that there is a positive influence on economic growth with the human development index.

Another factor that can affect the human development index is education. The quality of education is one of the problems in the implementation of national education in Indonesia, this is evidenced by the low human capital index or *human resources index* (HR). Indonesia is ranked 87 out of 157 countries in the HCI issued by the world bank in 2018. Education is an important aspect in measuring the quality of human life because it can create productivity towards human development by increasing the cognitive and affective domains. (Kusumaningrum, 2018). The indicator used to measure the level of education is the Average School Years (RLS)/ *Mean Years School* (MYS).

The average length of schooling (RLS) is the average number of years that have been completed by the population at all levels of formal education they have had. This figure can also describe the quality of education of the population in a region. This figure is calculated using three simultaneous variables, namely the variable school participation, level/class being attended/had been attended, and the last certificate held. The population calculated in the average length of schooling is the population aged 15 years and over (BPS, 2017).

Several previous studies regarding the variable level of education (average length of schooling) in relation to the human development index stated that, based on research results (Listiyani et al. 2022.) shows that the average length of schooling at the level of education has no significant effect on the human development index. Apart from that, the research conducted (Setyowati and Ediyono 2021) found that the human development index is influenced by the level of education.

In the context of human development, another factor that can affect the human development index is the problem of unemployment. Unemployment is a situation where someone who belongs to the labor force wants to get a job but has not been able to get the job (Harahap,

2018). Unemployment is a condition where a person belonging to the labor force wants to get a job but has not been able to get one. Viewed from an individual point of view, unemployment creates economic and social problems for those who experience it. According to Sukirno (2004) the absence of income causes the unemployed to reduce their consumption expenditure. In addition, unemployment can also disrupt the health level of the family.

Equity is again a serious homework for provincial governments in Indonesia, the gap in the percentage of Open Unemployment in 2021 based on data published by the Central Bureau of Statistics for several provinces is still quite high, the figure is still above 9%, namely the Riau Islands and West Java provinces. Equal distribution of employment opportunities in various sectors throughout the province is a real challenge that must be resolved by every government in Indonesia. Several previous studies conducted (Akinyele et al., 2022)and (Kasnelly and Wardiah 2021) on the relationship between unemployment and poverty show that there is a positive and significant influence. Meanwhile, the research conducted (Waveningrum & Soesilowati, 2021) found that there was no significant effect.

Another problem in the process of human development in every province in Indonesia is poverty. The high poverty rate is still a major concern in the development goals encountered in each region. According to Ragnar Nurske, the causes of poverty are due to low savings, low investment, lack of capital, low productivity, low income which returns causes low savings and so on (Dewi et al., 2016). On the other hand, the condition of Indonesia's per capita income is what makes the problem of poverty still a phenomenon that is difficult to find a solution to.

The occurrence of poverty is caused by human backwardness and natural resources. Management of natural resources is highly dependent on human productive capacity. If the population is poor and has low education, it will result in a scarcity of technical skills, knowledge, and entrepreneurial activities which will automatically cause the available natural resources to be neglected, underdeveloped, or even misused. These natural resources will affect the rate of economic growth. On the other hand, a lack of natural resources will lead to poverty because natural resources are the main source of human needs.

The problem of poverty caused by a lack of quality human resources will have an impact on their skills and will not have income which can cause their purchasing power to decrease so that they enter the cycle of poverty. Previous research on the effect of poverty on the human development index conducted by (Ningrum, Khairunnisa, and Huda 2020) shows that there is a significant and positive influence. Meanwhile, research (Sudana and Sudarsani 2021) obtained the result that there was a significant and negative influence.

Based on the explanation above, we can see that there are still high inequalities that occur in the process of human development due to differences in aspects of economic growth, level of education, unemployment, and poverty which are still quite high between provinces in Indonesia. This has its own interest for researchers to find out how much influence economic growth, education level, unemployment, and poverty have on the human development index.

Based on previous research which obtained different results, the researchers wanted to carry out an update in research on the four variables namely unemployment, economic growth, level of education and poverty on the human development index in Indonesia.

2. RESERCH METHOD

The data used in this study is secondary data which is panel data consisting of *time series data.* Data were taken from 33 provinces in Indonesia for the 2011-2020 period. The analytical technique used in this research is path analysis. analysis used to examine the effect of

the poverty variable as an intervening variable. Path analysis examines the strength of direct and indirect influence. In processing data researchers use the SmartPLS3 program.

All data used in this study comes from the Central Bureau of Statistics (BPS). The following are the research variables used:

Table 1. Research Variables

Variable	Definition	Indicator
Unemployment Rate (X1)	Open unemployment according to the Central Bureau of Statistics (BPS) are people who enter the labor force (15 years and over) who are looking for work, who are preparing for business.	• Open Unemployment Rate
Economic growth (X2)	The economic growth of a region can be seen from the Gross Regional Domestic Product as the total production (output) produced by a region in a period.	• Gross Regional Domestic Product (GRDP) based on constant prices
Education Level (X3)	Rata-rata Lama Sekolah (RLS)/ Mean Years School (MYS) didefinisikan sebagai jumlah tahun yang digunakan oleh penduduk dalam menjalani pendidikan forma	• Average School Years
Poverty Rate (Z)	Persentase penduduk miskin yang berada di bawah garis kemiskinan. Headcount Index secara sederhana mengukur proporsi yang dikategorikan miskin	• Poor Population Rate
Human Development Index (Y)	According to BPS, the Human Development Index is a comparative measurement of life expectancy, education and standard of living.	• Standard of Living Index

3. RESULT AND DISCUSSION

Results

Table 2. Descriptive Statistics

	No	Means	Median	Minimum	Maximum	Standard Deviation
Unemployment	1,000	5,436	5.020	1,400	13,740	2.116
Economic growth	2,000	4,927	5,470	-15,740	21,760	3,387

Level of education	3,000	8,210	8,180	5,730	11.170	1,003
Poverty level	4,000	11,552	10.320	3,420	31,530	6,053
IPM	5,000	68,839	68,880	55010	80,770	4,433

Based on table 2 it can be seen that the results of the descriptive statistical test describe the value of each variable. Unemployment with an average value of 5,436, economic growth 4,927, education level 8,210, poverty rate 11,552, and HDI with an average value of 68,839.

Table 3. Hypothesis Testing

	Path Coefficients	Sample Means	Standard Deviation	T Statistics	P Values
Derect Influence					
Unemployment -> Human Development Index	-0.114	-0.113	0.029	3,949	0
Unemployment -> Poverty Rate	0.071	0.07	0.056	1,258	0.209
Economic Growth -> Human Development Index	-0.105	-0.107	0.025	4,257	0
Economic Growth -> Poverty Rate	-0.069	-0.066	0.051	1,345	0.179
Poverty Rate -> Human Development Index	-0.321	-0.319	0.033	9,697	0
Education Level -> Human Development Index	0.701	0.702	0.027	26,039	0
Education Level -> Poverty Level	-0.544	-0.541	0.047	11,523	0
Influence Influence					
Unemployment -> Poverty Rate -> Human Development Index	-0.023	-0.023	0.019	1,213	0.226
Economic Growth -> Poverty Rate -> Human Development Index	0.022	0.021	0.017	1,327	0.185
Education Level -> Poverty Rate -> Human Development Index	0.175	0.173	0.025	7.105	0

Source: SmartPLS output, processed in 2023

a. Effect of Unemployment Rate on Human Development Index

Based on the test results in table 3, it can be seen that the construct of the unemployment rate has an influence on the human development index with a path coefficient value of -0.114 in a negative direction. This is based on the t-statistical value of this construct relationship which is 3.819 > 1.96 with p- values and 0.000 < 0.05. So it can be concluded that the unemployment rate has a negative and significant effect on the human development index.

b. The Effect of Economic Growth on the Human Development Index

Based on the test results in table 3, it can be seen that the construct of economic growth has an influence on the human development index with a path coefficient value of -0.105 in a negative direction. This is based on the t-statistical value of this construct relationship which is 4.257 > 1.96 with p-values of 0.000 < 0.05. So it can be concluded that economic growth has a negative and significant effect on the human development index.

c. Effect of Education Level on the Human Development Index

Based on the test results in table 3, it can be seen that the construct of educational level has an influence on the human development index with a path coefficient value of 0.701 in a positive direction. This is based on the t-statistical value of this construct relationship which is 26.039 > 1.96 with p-values and 0.000 < 0.05. So it can be concluded that the level of education has a positive and significant effect on the human development index.

d. The Effect of Unemployment Rate on Poverty

Based on the test results in table 3, it can be seen that the construct of the unemployment rate has no effect on poverty with a path coefficient value of 0.071 in a positive direction. This is based on the t-statistical value of this construct relationship which is 1.258 > 1.96 with p-values of 0.209 <0.05. So it can be concluded that the unemployment rate has no effect on poverty.

e. The Effect of Economic Growth on Poverty

Based on the test results in table 3, it can be seen that the construct of economic growth has no effect on poverty with a path coefficient value of -0.069 in a negative direction. This is based on the t-statistical value on this construct relationship which is 1.345 > 1.96 with p-values and 0.179 <0.05. So it can be concluded that economic growth has no effect on poverty.

f. The Effect of Education Level on Poverty

Based on the test results in table 3, it can be seen that the construct of education level has an influence on poverty with a path coefficient value of -0.544 in a negative direction. This is based on the t-statistical value of this construct relationship which is 11.523 > 1.96 with p-values and 0.000 < 0.05. So it can be concluded that the level of education has a negative and significant effect on poverty.

g. The Effect of Poverty on the Human Development Index

Based on the test results in table 3, it can be seen that the construct of poverty has an influence on the human development index with a path coefficient value of -0.321 in a negative direction. This is based on the t-statistical value of this construct relationship

which is 9.697 > 1.96 with p-values and 0.000 < 0.05. So it can be concluded that the level of education has a negative and significant effect on the human development index.

h. The Influence of the Unemployment Rate on the Human Development Index Through Poverty

Based on the test results in table 3, it can be seen that the construct of the unemployment rate on the human development index through poverty has an influence with a path coefficient value of -0.023. This is based on the t-statistical value of this construct relationship which is 1.213 > 1.96 with p-values of 0.226 <0.05. So it can be concluded that the poverty rate cannot mediate the relationship between the unemployment rate and the human development index.

i. The Influence of Economic Growth on the Human Development Index Through Poverty

Based on the test results in table 3, it can be seen that the construct of economic growth on the human development index through poverty has an influence with a path coefficient value of 0.022. This is based on the t-statistical value of this construct relationship which is 1.327 > 1.96 with p-values of 0.185 <0.05. So it can be concluded that the poverty rate cannot mediate the relationship between economic growth and the human development index.

j. The Influence of Education Level on the Human Development Index Through Poverty

Based on the test results in table 3, it can be seen that the construct of the level of education on the human development index through poverty has an influence with a path coefficient value of 0.175. This is based on the t-statistical value of this construct relationship which is 7.105 > 1.96 with p-values and 0.000 < 0.05. So it can be concluded that the level of poverty cannot mediate the relationship between the level of education and the human development index.

Test The Coefficient Of Determination

Table 4. The coefficient of determination

	R Square
Human Development Index	0.782
Poverty level	0.268

Source: SmartPLS output, processed in 2023

Based on table 4 it can be concluded that the variables of unemployment, economic growth, education and poverty are able to influence the human development index variable by 0.782 or 78% while the remaining 22% is influenced by other variables not included in this study. In addition, the variables unemployment, economic growth, education can influence the poverty rate by 0.268 or 26% while the remaining 74% is explained by other variables not tested in this study

Discussion

Unemployment Rate

Based on the research results table above, it shows that the unemployment variable can have a negative and significant effect on the human development index. This means that if the

unemployment rate decreases, it will be followed by an increase in the human development index. Therefore the emphasis on reducing the unemployment rate is a consideration for every province in Indonesia.

The results of this study are not in line with previous studies conducted by (Akinyele et al. 2022) , (Kasnelly and Wardiah 2021) and (Noviatamara, 2019) which resulted that unemployment has a positive and significant effect on the human development index. However, the results of this study are in line with research conducted (Wahyuningrum and Soesilowati 2021) where the unemployment rate has a negative and significant effect. Thus, any decrease in the unemployment rate will have an impact on increasing decent living standards. Because one important aspect in determining the welfare of society is the level of income.

This study also examines the effect of the unemployment rate on the poverty level. The results of this study show that the unemployment rate has no effect and is not significant on the poverty rate. Based on these results, this research is in line with the results of research (Probosiwi, 2016)and (Endrayani & Dewi, 2016) states that unemployment has no significant effect on the level of poverty. This is because every unemployed is an educated group who is looking for work.

Economic Growth

The results of this study found that the variable economic growth has a negative and significant effect on the human development index. This supports the results of research conducted (Emara & Mohamed, 2021)and (Lismana and Sumarsono 2022) related to economic growth with the human development index. In contrast to the results of research conducted (Korle et al., 2020)which showed that economic growth has a positive effect on the human development index. Where every economic growth is related to human resources, it will encourage more effective human development.

In addition, this study discusses the direct effect of economic growth on poverty levels. Shows that economic growth has no effect and is not significant. These results are in accordance with research (Prasetyoningrum, 2018). If economic growth increases, it will not have a significant impact on reducing the number of poor people during that period. If economic growth occurs, the income of the poor does not experience changes that can change their income above the poverty line.

Level of Education

Education as the main source of human capital in the process of human development certainly has an influence on increasing the human development index. This study shows that the level of education has a positive and significant effect on the human development index. Thus, it shows that the greater the level of education, the greater the increase in the human development index.

This supports research (Setyowati & Ediyono, 2021) which states that the level of education has a positive and significant effect on the human development index. When a person's education level is higher, it will produce high productivity so that it can have an impact on the formation of a decent life. And the results of this study are different from research conducted by (Listiyani et al. 2022) which states that there is no significant effect between the level of education and the human development index.

Meanwhile, in the relationship between education level and poverty level in this study, it shows that there is a negative and significant influence. This supports research findings (Hadi, 2019)and (Sudaryati et al., 2021)which state that there is a negative and significant

effect between education level and poverty level. The results of this study are different from research (Yuliani et al 2019).

Poverty Level

The results of the test conducted on the effect of the poverty rate show that poverty has a negative and significant effect on the Human Development Index. These results are consistent with research (Wulandari et al., 2022)and (Kasnelly and Wardiah 2021) that poverty has a significant negative effect on the Human Development Index. From these results it can be understood if the poverty rate continues to increase then it will affect the low level of human resources so that underdeveloped communities can be creat.

Poverty Rate Cannot Mediate Between Unemployment Rate And HDI

Based on the output in table 3, the *indirect effect* between the unemployment rate and the poverty rate is not significant, then the poverty rate on the human development index is also not significant, so it can be concluded that poverty cannot mediate between unemployment and the human development index. The unemployment rate can increase the human development index through poverty by -0.023. The value of the indirect path coefficient is smaller than the value of the direct path coefficient in increasing the human development index. Where the direct path coefficient between the unemployment rate and the human development index is -0.114. This means that increasing the human development index has a greater direct impact.

Poverty Level Cannot Mediate Between Economic Growth And HDI

Based on the output in table 3, the *indirect effect* between economic growth and the poverty rate is not significant, then the poverty rate on the human development index is also not significant, so it can be concluded that poverty cannot mediate between economic growth and the human development index. Economic growth can increase the human development index through poverty by 0.022. The value of the indirect path coefficient is smaller than the value of the direct path coefficient in increasing the human development index. Where the direct path coefficient between the unemployment rate and the human development index is -0.105.

Poverty Level Cannot Mediate Between Education Level And HDI

Based on the output in table 3, the *indirect effect* between the level of education and the poverty level is significant, then the poverty rate on the human development index is also significant, so it can be concluded that poverty can mediate between the level of education and the human development index. The level of education can increase the human development index through poverty by 0.175. The value of the indirect path coefficient is smaller than the value of the direct path coefficient in increasing the human development index. Where the direct path coefficient between the unemployment rate and the human development index is 0.701.

This is because, the human development index which has three dimensions, one of which is education, if education in Indonesia is getting higher but not accompanied by adequate employment, then it will not be able to reduce unemployment but on the contrary, the greater the education, the greater unemployment.

4. CONCLUSION

Based on the results of this study, it was found that the variables of unemployment, economic growth, education, and poverty directly have a significant effect on the human development index in 33 provinces of Indonesia.

Meanwhile, the results of the indirect relationship show that the poverty variable cannot mediate between unemployment and the human development index. And the poverty variable also cannot mediate between economic growth and the human development index. Meanwhile, the poverty variable can mediate between the relationship between education and the human development index.

For further research, it is suggested that researchers look at the influence arising from external factors in the form of investment which aims to determine the right policies so as to increase human resources.

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