ANALYSIS OF THE EFFECT OF HUMAN DEVELOPMENT INDEX ON ECONOMIC GROWTH, POVERTY AND INVESTMENT IN RIAU PROVINCE

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Abstract : The high human development index in Indonesia is an indicator that the quality of human productivity in Riau Province is categorized as good, but the economic growth rate is still low and tends to be negative, the level of poverty is high and investment is low. The purpose of this study was to determine whether there is an effect of the human development index on the rate of economic growth, poverty and investment in Riau Province. The data used are secondary data from 2011-2019 using the Eviews analysis tool which shows that the human development index and the rate of economic growth have a significant negative effect by having a probability of 0.002 while the human development index variable has a significant positive effect on investment and there is no intermediate influence human development index on poverty.

Keywords: HDI, economic growth rate, poverty and investment

JEL Classification : C40,J24,O10

1 INTRODUCTION

Human development is one of the most important factors in economic growth where human development creates quality human resources so as to increase economic growth. Quality human resources have better productivity so that the role of human resources to increase economic growth is very large, this is supported by the theory regarding the role of labor capital in economic growth, this is a neo-classical theory pioneered by Robert Solow who stated his opinion that the growth of national products determined by the growth of two types of input, capital growth and labor growth and this opinion is also by Denison who analyzed economic growth in developed countries can use the use of sources of capital goods.
According to research from Gustav Ranis, his research entitled Economic Growth and Human Development says that with a high level of the Human Development Index (HDI) which leads to high growth and high growth, the Human Development Index (HDI) increases. In fact, a weak Human Development Index (HDI) can lead to low growth and its poor damage to an improved Human Development Index (HDI). The growth of the GRDP rate will accelerate the process of increasing per capita output in the long term 'process' because it contains dynamic or developmental elements (Rapana, page 9).
According to Dr. Singer, the order form consists of items that look like factories, machine tools, as well as goods that do not appear to be high quality education, health, scientific traditions and research (Jhingan ,: 337). The main objective of economic development is to build capital equipment on a scale sufficient to increase productivity in agriculture, plantations and industry.

Capital is also needed to prepare schools, hospitals, roads, trains, and so on (Jhingan: 338). According to Schumpeter, the increase in state income from time to time, its development is very unstable and the situation is determined by the possibility of carrying out profitable capital orders that will be carried out by entrepreneurs. So according to Schumpther, investment in the economy can be divided into two groups, namely: autonomous investment (autonomous investment) and capital investment (induced investment). The neoclassical theory of low working capital ratios in developing countries increases the level of investment that is unusually high. Hence, free market reforms imposed on heavily indebted World Bank and IMF countries should increase investment, increase productivity, and raise living standards. (Todaro, 2000: 169). But the classical view differs from that of Keynes who said that " Supply determines its own Demand. " This means that the increase in goods and capital in society will create an increase in national production for economic development.

2 LITERATURE REVIEW

Economic and poverty development is one of the indicators in economic development by reducing poverty levels so that economic development continues to increase. Poverty is one of the problems in every region and the government is always trying to reduce the level of poverty in each region. Data released by the Central Statistics Agency of Riau Province, the number of poor people every year in Riau Province tends to increase every year but tends to be unstable, sometimes experiencing an increase and the following year experiencing a decrease, it is undeniable that one of the other factors that affect

economic growth is a high level in where the community is unable to buy or fulfill their needs which results in decreased community welfare and results in the inability of the community to send their children which results in low levels of education and high increase will also affect the level of crime which will interfere with regional security which will be considered as consideration for investors in investing their capital then this makes the level of poverty an important role in influencing it in the stability of development.

According to Mankiw, poverty is an economic disease that affects all groups in the population, although the size of the effect is not the same for each group. The poverty rate itself is the percentage of the family population whose income is below an absolute level or number called the poverty line (Mankiw: p. 574). According to Marx the causes of poverty occur due to the exploitation by the owners of capital or capitalists against the workers or the proletariat, the pattern of exploitation differs from one era to another according to what is called the mode of production, quoted from Rahardjo's book. . Myrdal sees poverty as a political problem, that is, a problem that requires state political decisions, but besides that he also sees the problem of poverty as an economic reality (Rahardjo Hal: xxii). The number of poor people who are expected to continue to experience a decline every year is the hope of every district / city leader. The decline in the number of poor people is a factor in driving economic growth in the regencies / cities of Riau Province.
From the background description of this study, the aim of the study was to determine the effect of the human development index on the rate of economic growth, investment and poverty in Riau Province.

3 RESEARCH OBJECTIVE AND METHODOLOGY

The type of data used is secondary data which means secondary data is data obtained indirectly (Saleh page 5). The sources obtained in this study are from the Central Bureau of Statistics (BPS), related agencies in the writing of this research and related institutions in this research. In detail, the data used in this study are:
1. Data on the rate of economic growth from the 2011-2019 period from the Central Statistics Agency (BPS)
2. Human Development Index (HDI) data from the 2011-2019 period from the Central Statistics Agency
3. Data on investment for foreign investment (PMA) and domestic investment (PMDN) in the province for the 2011-2019 period, Riau, the data obtained is sourced from the Investment Coordinating Board
4. Data on the number of poverty in districts / cities in Riau Province for the period 2011-2019 from the Central Statistics Agency (BPS)

3.1 Panel Data Method

Data is a collection of numbers / information / sentences that describe an event or event in a certain period. (Seran, Page: 27). Panel data is data consisting of a combination of time series data and cross-section data in other words, panel data consists of data from several objects and includes several times (Pambuko, page: 6). Users of panel data in observation have several advantages: First, panel data is able to provide more data so that it will produce a greater degree of feedom. Second, panel data can overcome problems that arise when there are omitted-variable problems. (Seran, Page: 30). The advantages of panel data compared to time series and cross sections are as follows (Pambuko, Page: 83)
1.Can control heterogeneous individuals, where individual data such as companies, between regions, varies widely. Without controlling, these data will be biased
2.By combining time series data and cross section data, panel data provides more informative, more varied data, low levels of collinearity between variables, increases the degree of freedom (degee of freedom), and is more efficient
3.By studying repated cross-section data, panel data is suitable for dynamics of change studies.

Quoted from the research of Mirza (2011), there are 3 fundamental approach techniques used in analyzing panel data:
1.Pooled Least Square Model (Common Effect)
This model is known as common effect estimation, which is the simplest regression technique for estimating panel data by only combining time series and cross section data, this model only combines the two data regardless of the difference between time and individuals so that it can be said that this model is the same. with the OLS (Ordinary Least Square) method because it uses ordinary small squares

2.Fixed Effect Approach Model (Fixed Effect)
This model approach uses a dummy variable known as a fixed effect modal or the Least Square Dummy Variable or also known as the Covariace Model. In the Fixed Effect method, estimation can be done without weight (no weighted) or Least Square Dummy Variable (LSDV) and with weight (cross section weight) or general Least Square (GLS).

3.Random Effect Approach Model (Random Effect)
The third approach panel data model is the random effects model. In a random effects model, parameters that differ between regions and over time are entered into the error. Because of this, the random effects model is also called an error component model. By using this random effects model, it can save the use of degrees of freedom and not reduce the number as is done in the fixed effects model.

Econometrically, the relationship between the rate of economic growth, the human development index, investment and poverty in the districts and cities of Riau

Province can be analyzed by the following equation:
IPM it = αi + β1GRWT + β2 KMS + β3 INV + uit
Where :
HDI = Human Development Index
GRWT = The rate of economic growth
KMS = Poverty
INV = Investment
Descriptive analysis is an analysis that explains the general description of the data used. An overview of the data in this study is the variable rate of economic growth, the human development index, investment and poverty. Table 3.1. will explain the descriptive analysis in this study.

Table 3.1. Descriptive Statistical Analysis Table

	Economic Growth Rate	Human Development Index	Investation	Poverty
Average	3.481944	69.52824	39409.29	41.74306
Median	4.010000	69.65000	863.6450	39.41000
Maximum	8.390000	81.35000	822129.0	72.28000
Minimum	-3.850000	60.38000	0.000000	10.95000
Std. Dev.	2.816586	4.300102	149196.3	16.38861
Observation	108	108	108	108

The economic growth rate used in this study has an average value of 3.481944. The economic growth rate in 2011 -2019 has a maximum value of 8,390 with a minimum value of -3.85. The standard deviation value is 36525.33. The human development index variable in this study in 2011-2019 has a maximum and minimum value of 81.350 and 60.38. The average development of the human development index also shows 69.52. The standard deviation value of the human development index variable is 4.30. The investment variable has a standard deviation of 149196.3. The maximum and minimum values for the investment variable in 2011-2019 are 822129.0 and 0. The average value of the investment variable is 39409.29. Poverty used in this study has an average value of 41.74. Poverty in 2011-2019 has a maximum value of 72.28 with a minimum value of 10.95. The standard deviation value is 16.38.

4 RESULTS AND DISCUSSION

The impact of the human development index, poverty and investment has an influence on the rate of economic growth. The analysis tool uses panel data to explain the relationship between the dependent and independent variables. Table 4.1 shows the results of the analysis using panel data.

Table. 4.1 Results of panel data analysis

Variable		Panel Least Square	Fixed Effect Model	Random Effect Model
Economic Growth Rate	Coefficient	-0,062	-0,224	-0,238
	Probability	0,642	0,004*	0,002*
Investment	Coefficient	3999	1810	1832
	Probability	0,115	0,007*	0,069**
Poverty	Coefficient	-0,113	0,062	0,017
	Probability	0,000*	0,150	0,630
R-Squared		0,21	0,90	0,131
Adj. R-Squared		0,18	0,88	0,106
Chow test			0,000	
Hausman test			0,155	
Lagrange Multiplier			0,000	

* α=1%, ** α=5%, *** α=10%

The research model used in this study is the Random Effect Model (REM). This can be seen from the chow test used to select the best model between the Least Square Panel (PLS) and the Fixed Effect Model (FEM) showing the Fixed Effect Model (FEM) with a value of 0.00 less than 0.05. In the hauman test used to compare the Fixed Effect Model (FEM) with the Effect Model (REM), it has a value of 0.155 which is greater than 0.005, so it shows the best Random Effect Model (REM). In the Lagrange Multiplier test which is used to compare the Random Effect Model (REM) with the Least Square Panel (PLS) has a value of 0.00 less than 0.05, so the Random Effect Model (REM) is the best. The use of the Random Effect Model (REM) shows the variable rate of economic growth with significant investment affects the human development index. The variable rate of economic growth with a negative coefficient value of 0.238 and a probability of 0.002 is smaller than the alpha value (α = 1%). These results indicate that the variable rate of economic growth has a significant negative effect on the human development index. Thus, when the rate of economic growth shows an increase, the human development index will decline.

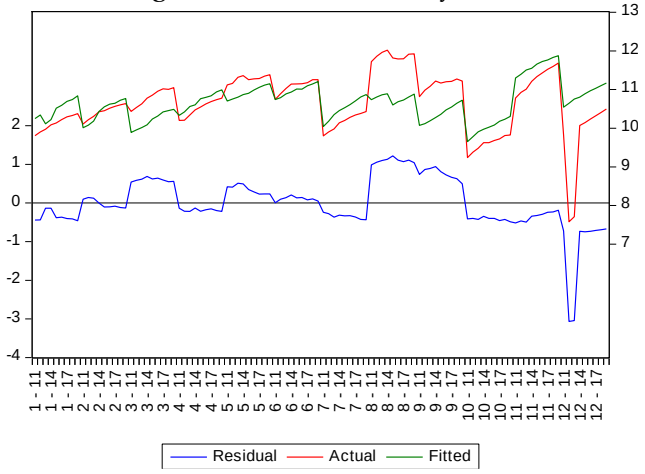
The investment variable with a positive coefficient of 1832 and a probability of 0.069 is smaller than the alpha value (α = 5%). This shows that the investment variable has a significant positive effect on the human development index. Thus, when investment increases, it will be accompanied by an increase in the human development index. The results differ with the poverty variable which is not significant negatively on the human development index. This is due to the probability value of 0.630 which is greater than the alpha value (α = 1%, 5%, 10%). Conditions can be interpreted that the fluctuating human development index is not followed by the development of the number of poor people.

Table 3.2 Classical Assumption Results

Classic Assumptions	Result	Conclusion
Normality	0,000	Nothing
Autocorrelation	DW = 0,411 > DU = 2,127	Nothing
Multicollinearity	nilai tidak melebihi 0,90	Nothing
Heteroscedasticity		Nothing

The value in autocorrelation which shows diai from DW is 0.411 greater than the DU value of 2.127 which means there is no autocorrelation. The muticollinearity value of each correlation between variables does not show a ditas value of 0.90, so there is no multicollinearity in the correlation between variables.

Figure 4.1 Heteroscedasticity Results



Heteroscedasticity does not show any heteroscedasticity which can be seen from the fluctuating heteroscedasticity graph. While the results of normality occur in the data normality with a probability of 0.000.

5 CONCLUSION

Based on the results of this study using panel data analysis tools, it can be concluded as follows.

1. The economic growth rate variable has a significant negative effect on the human development index with a probability value of 0.002 smaller than the alpha value
2. The investment variable has a significant positive effect on the human development index with a probability value of 0.069 smaller than the alpha value
3. The poverty variable does not have a significant effect on the human development index with a probability value of 0.630 greater than the alpha value

Suggestion

The suggestions obtained in this study based on the results of this study are divided into two parts as follows

1.Riau provincial government to stimulate human resources so that human development continues to increase with the aim of human development will be successful and lead to high economic growth.

2.Based on the results of research for the government, the results of this research can be used as reference related to factors that affect the human development index in terms of economic growth, poverty and investment.

3.The government must maintain the human development index because it has a positive impact on increasing investment in Riau Province

For further research, it should involve other variables which are thought to affect the rate of economic growth, poverty and investment so as to obtain better research findings

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