

## **Effect of HDI Components and Development of MSMEs on Economic Growth and Their Implications on Poverty and Unemployment Province of Yogyakarta Special Region (DIY)**

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### **ABSTRACT**

The purpose of this study is to identify, review, analyze, discover and describe the Effect of IPM Components and MSME Development on Economic Growth and Their Implications for Poverty and Unemployment in DIY Provinces. The research methods used in this study are quantitative with tiered regression analysis techniques for cross-section and time series data. The results showed that in model 1 health, knowledge, real per capita expenditure and the development of UMKM significantly and positively affect the economic growth of DIY Province, health and education variables have a partial impact on economic growth while per capita spending and the development of UMKM partially has no effect on economic growth, in model 2 shows that economic growth is significant and negative. Affecting the poverty of the population of DIY Province, in model 3 shows that economic growth significantly and negatively affects the unemployment of the residents of DIY Provinces.

Keywords: Health; Knowledge; UMKM; Poverty; Unemployment.

### **INTRODUCTION**

The problem faced by a country is to find the ideal conditions for its people and how to realize it (Hooghe et al. 2010; Runciman, Merry, and Walton 2017). The search for this ideal model is called development (Battiliana et al. 2012; Słodczyk 2016; Wang and Kang n.d.). The study of economic development has undergone several changes (Arndt 2015; Bairoch 2013; Boserup, Tan, and Toulmin 2013). In 1950 development was defined as economic growth, so this perception gave birth to an understanding of the need for a high level of economic growth. Therefore, a country is said to be successful in carrying out development if the economic growth of the community is high (Abubakar, Kassim, and Yusoff 2015; Ouedraogo 2013).

The second change occurred in the late 1960s and early 1970s, economic development was no longer focused on high economic growth (Acemoglu 2012), but how to reduce poverty, inequality and unemployment. The third change occurred in 1970 to 1980, the study of development economics focused on the diversity of developing countries (NSB) and the identification of the factors that cause differences in the level of economic performance of each country (Carlsson 2012). Studies began to be directed at the specific characteristics of a country

based on its empirical conditions and the use of different assumptions in each NSB. In the 1980s and 1990s, neoliberal thought emerged, emphasizing the beneficial role of large markets, an open economy, and the inefficient privatization of state-owned enterprises. Due to the variety of understandings of development, it is a complex concept to define and measure compared to economic growth alone. Therefore, state that development must be viewed as a multidimensional process that involves fundamental changes in social structures, public attitudes, and national institutions, as well as acceleration and growth, reducing inequality, and reducing poverty.

Economic development is important for a country. One of the targets of economic development in 2020 is to improve the economic welfare of the community on an ongoing basis. The indicators used are the gross domestic product (GDP) growth target of 5.1% to 5.6%. But in reality in 2020, GDP decreased due to Covid 19. In the third quarter of 2020, economic growth was -3.49%. The policy that has been carried out by the government in the context of economic recovery is to strengthen structural reforms (Anggarini and Rakhmanita 2020; Steel and Harris 2020; Strand and Toman 2010). Several policies that will be taken by the government are improving the quality of human resources and continuing support for the empowerment of MSMEs (Aritonang 2017; Rothstein and Teorell 2012).

Solow's theory states that economic growth always comes from one or more of three factors, an increase in the quantity and quality of labor (through population growth and improvement in education), additional capital and technology (Sharipov 2015; Solow 2016). Meanwhile, one of the tools to measure the development of the quality and quantity of labor is the HDI. Simon Kuznet defines a country's economic growth as "the ability of that country to provide its population with ever-increasing economic goods, the growth of this capability based on technological and institutional progress and the ideological adjustments it requires". There are three main factors in the economic growth of any nation, namely: capital accumulation, population growth and technological progress (Bucci, Eraydin, and Müller 2019).

Based on the background of the above problems, the authors are interested in conducting further research with the title "The Influence of the HDI Component and the Development of MSMEs on Economic Growth and Its Implications on Poverty and Unemployment in the Special Region of Yogyakarta (DIY)".

## METHOD

The population of this study is all data variables related to the health index, education index, per capita expenditure and the development of MSMEs on economic growth and their implications for poverty and unemployment, totaling 5 districts with a period of 10 years so that the population is 50. The sample in this study uses a sample saturation is the technique of determining the sample by taking the total population, then the number of samples is 50. The data used in this study, when viewed from its nature, is quantitative data in the form of numbers and can be measured. The data used in this study is secondary data, namely data in the form of annuals that have been compiled and published by related parties. The data needed in this study is secondary data whose collection is in the form of *time series* data for 10 years, from 2010 to 2019 with 5 districts, totaling 50.

## RESULT AND DISCUSSION

### 1. Panel Data Analysis Results (Model I)

#### a. Estimation Results of Panel Data Model Model 1

Based on paired testing of the three panel data regression models model 1, it can be concluded that the results of the *Chow* test for the panel data model are better using *fixed effects* panel data and the *Hausman* test results for the panel data model also show that it is better to use the *random effects* panel data model and test *The better langrangge multiplier* (LM) model for panel data is the *random effect*, so it is better to test the hypothesis in this study using the *fixed effect* model, following are the conclusions of the panel data model test:

**Table 1 Conclusion of Panel Data Regression Model Testing (Model I)**

No.	Method	Test	Results
1.	<i>Chow-Test</i>	<i>Fixed vs Common</i>	<i>Fixed Effect</i>
2.	<i>Hausman Test</i>	<i>Random vs Fixed</i>	<i>Random Effect</i>
3.	<i>Lagrange Multiplier</i>	<i>Common vs Random</i>	<i>Common Effect</i>

#### b. Panel Data Regression Analysis Results Model 1

Based on the results of panel data regression, the following equation is formed:

$$Y = 206.6647 - 122.2814 X_1 + 9.433523 X_2 + 3.528113 X_3 + 0.011834 X_4$$

So the analysis is as follows:

- 1) The constant value of 206.6647 has a statistical meaning if all the *ceteris paribus* variables are 0, then the value of GRDP will increase by 206.6647.
- 2) The value of the regression coefficient  $X_1 = -122.2814$  has a statistical meaning that an increase of 1 unit of the variable life expectancy will reduce the value of GRDP by 122.2814.
- 3) The value of the regression coefficient  $X_2 = 9.433523$  has a statistical meaning that an increase of 1 unit of the average variable HLS and RLS will increase the value of GRDP by 9.433523.
- 4) The regression coefficient  $X_3 = 3,528113$  had a statistically meaning that an increase of 1 unit of variable spending per capita will increase the value of GDP amounted to 3.528113.
- 5) The value of the regression coefficient  $X_4 = 0.011834$  has a statistical meaning that an increase of 1 unit of the MSME development variable will increase the GRDP value by 0.011834.

#### c. Simultaneous Test Results (Test F) Model 1

Based on the results of model 1, it can be seen that the *calculated* F value is 21.45025 and the  $F_{table}$  is 2.61.  $F_{table}$  is obtained from the value of the numerator (k-1) of (4 - 1 = 3) and the denominator / df = (n - k), df = (50 - 1 = 49) then the  $F_{table}$  is 2.79. So it can be concluded that  $F_{arithmetic} > F_{table}$  rejects the null hypothesis, which means that the independent variables (life expectancy, HLS and RLS averages, per capita expenditure and MSME development) simultaneously affect GRDP.

#### d. Partial Test Results (t Test) Model 1

Based on the table above, the results of the t-test (partial) analysis are as follows:

##### 1) Effect of Life Expectancy on GDP

Based on the results of the  $t_{table}$  value with  $\alpha = 5\%$ ,  $n = 50$  and  $k = 1$  then  $df = (nk)$  is  $df = (50-1) = 49$ , then  $t_{table}(0.05;49) = 2.00958$  so the comparison is obtained, namely  $-t_{count} < -t_{table} - 2,228539 < -2,00958$ . Then the probability value on the variable obtained the life expectancy value  $= 0.0321$ , while the standard probability is 0.05 or 5% so that a comparison of the probability value of life expectancy  $= 0.0321 < 0.05$ , so it is concluded that the independent variable life expectancy has a significant effect on significant to the GRDP variable.

##### 2) Effect of Average HLS and RLS on GRDP

Based on the results of the  $t_{table}$  value with  $\alpha = 5\%$ ,  $n = 50$  and  $k = 1$  then  $df = (nk)$  is  $df = (50-1) = 49$ , then  $t_{table}(0.05;49) = 2.00958$  so the comparison obtained is  $t_{arithmetic} > t_{table} 3.172598 > 2.00958$ . Then the probability value on the variable is obtained the average value of HLS and RLS  $= 0.0029$ , while the standard probability is 0.05 or 5% so that a comparison of the probability value of the average HLS and RLS  $= 0.0029 < 0.05$ , so that it is concluded that the variable independent The average HLS and RLS have a significant effect on the GRDP variable.

##### 3) Effect of Per capita Expenditure on GRDP

Based on the results of the  $t_{table}$  value with  $\alpha = 5\%$ ,  $n = 50$  and  $k = 1$  then  $df = (nk)$  is  $df = (50-1) = 49$ , then  $t_{table}(0.05;49) = 2.00958$  so obtained a comparison that is  $t_{count} < t_{table} 1.369054 < 2.00958$ . Then the probability value on the variable is obtained the value of per capita expenditure  $= 0.1784$ , while the standard probability is 0.05 or 5% so that a comparison of the probability value of per capita expenditure is obtained  $= 0.1784 > 0.05$ , so it can be concluded that the independent variable per capita expenditure has no significant effect on GDP variable.

##### 4) The Effect of MSME Development on GRDP

Based on the results of the  $t_{table}$  value with  $\alpha = 5\%$ ,  $n = 50$  and  $k = 1$  then  $df = (nk)$  is  $df = (50-1) = 49$ , then  $t_{table}(0.05;49) = 2.00958$  so obtained a comparison that is  $t_{arithmetic} < t_{table} 0.015195 < 2.00958$ . Then the probability value on the variable is obtained the value of MSME development  $= 0.9879$ , while the standard probability is 0.05 or 5% so that a comparison of the probability value of MSME development is obtained  $= 0.9879 > 0.05$ , so it can be concluded that the independent variable MSME development has no significant effect on GDP variable.

#### e. Results of the Coefficient of Determination Model 1

Based on the coefficient of determination in the above table can be seen that the value of  $Adjusted R^2$  is 0.769522, which means the ability of the independent variables used in the study of life expectancy, average HLS and RLS, spending per capita and the development of SMEs in explaining the dependent variable (GDP) of 76.9522%, the remaining 23.0478% is explained by other variables not included in the research model.

## 2. Panel Data Analysis Results (Model 2)

### a. Estimation Results of Model 2 Panel Data Model

Based on pairwise testing of the three panel data regression models model 2, it can be concluded that the Chow test results for the panel data model are better using fixed

*effects* panel data and the *Hausman* test results for the panel data model also show that it is better to use the *random effects* panel data model and test *The better langrangge multiplier* (LM) model for panel data is the *random effect*, so it is better to test the hypothesis in this study using the *fixed effect* model, following are the conclusions of the panel data model test:

**Table 2 Conclusion of Panel Data Regression Model Testing (Model 2)**

No.	Method	Test	Results
1.	<i>Chow-Test</i>	<i>Fixed vs Common</i>	<i>Fixed Effect</i>
2.	<i>Hausman Test</i>	<i>Random vs Fixed</i>	<i>Random Effect</i>
3.	<i>Lagrange Multiplier</i>	<i>Common vs Random</i>	<i>Common Effect</i>

#### b. Panel Data Regression Analysis Results Model 2

Based on the results of panel data regression, the following equation is formed:

$$Z_1 = 25.32665 - 2.459032 Y$$

So the analysis is as follows:

- 1) The constant value of 25.32665 has a statistical meaning if all the variables of GRDP *cateris paribus* are 0, then the poverty value will increase by 25.32665.
- 2) The value of the regression coefficient  $Y = -2.459032$  has a statistical meaning that an increase of 1 unit of the GRDP variable will reduce the value of poverty by 2.459032.

#### c. Partial Test Results (t-test) Model 2

Based on the results of the  $t_{table}$  value with  $\alpha = 5\%$ ,  $n = 50$  and  $k = 1$  then  $df = (nk)$  is  $df = (50-1) = 49$ , then  $t_{table} (0.05;49) = 2.00958$  so the comparison is obtained, namely  $-t_{count} < -t_{table}$   $-3.202371 < -2.00958$ . Then the probability value on the variable obtained GRDP value = 0.0025, while the standard probability is 0.05 or 5% so that a comparison of the GRDP probability value = 0.0025 < 0.05, so it can be concluded that the GRDP independent variable has a significant effect on the poverty variable.

#### d. Results of the Coefficient of Determination Model 2

Based on the coefficient of determination in the above table can be seen that the value of  $R^2$  is 0.729768, which means the ability of the independent variables used in the study of the GDP in explaining the dependent variable (poverty) of 27.0232% 72.9768% is explained by other variables which were not included in the research model.

### 3. Panel Data Analysis Results (Model 3)

#### a. Estimation Results of Panel Data Model Model 3

Based on pairwise testing of the three panel data regression models model 3, it can be concluded that the results of the *Chow* test for the panel data model are better using *fixed effects* panel data and the *Hausman* test results for the panel data model also show that it is better to use the *random effects* panel data model and test *The better langrangge multiplier* (LM) model for panel data is the *random effect*, so it is better to test the hypothesis in this study using the *fixed effect* model, following are the conclusions of the panel data model test:

**Table 3 Conclusion of Panel Data Regression Model Testing (Model 3)**

No.	Method	Test	Results
1.	<i>Chow-Test</i>	<i>Fixed vs Common</i>	<i>Fixed Effect</i>
2.	<i>Hausman Test</i>	<i>Random vs Fixed</i>	<i>Random Effect</i>
3.	<i>Lagrange Multiplier</i>	<i>Common vs Random</i>	<i>Common Effect</i>

**b. Results of Panel Data Regression Analysis Model 3**

$$Z_2 = 13.56174 - 0.817554 Y$$

So the analysis is as follows:

- 1) The constant value of 13,56174 has a statistical meaning if all the variables of GRDP *cateris paribus* are 0, then the unemployment rate will increase by 13,56174.
- 2) The value of the regression coefficient  $Y = -0.817554$  has a statistical meaning that an increase of 1 unit of the GRDP variable will reduce the unemployment rate by 0.817554.

**c. Partial Test Results (t-test) Model 3**

Based on the value of  $t_{table}$  with  $\alpha = 5\%$ ,  $n = 50$  and  $k = 1$  then  $df = (nk)$  is  $df = (50-1) = 49$ , then  $t_{table}(0.05;49) = 2.00958$  so that we get The comparison is  $-t_{count} < -t_{table} -3.028937 < -2.00958$ . Then the probability value on the variable obtained GRDP value = 0.0041, while the standard *probability* is 0.05 or 5% so that a comparison of the *probability* value of GRDP = 0.0041  $< 0.05$ , so it can be concluded that the independent variable GRDP has a significant effect on the unemployment variable.

**d. Result of Coefficient of Determination Model 3**

Based on the coefficient of determination in the above table can be seen that the value of  $R^2$  is 0.724275, which means the ability of the independent variables used in the study of the GDP in explaining the dependent variable (unemployment) amounted to 27.5725% 72.4275% is explained by other variables which were not included in the research model.

**CONCLUSION**

Based on the analysis in chapter IV, the conclusions of this study are as, Health, knowledge, real per capita expenditure, and the development of MSMEs have a significant influence together on economic growth in the DIY Province. Health has a significant negative effect on economic growth in DIY Province. Knowledge has a significant positive effect on economic growth in the DIY Province. Real per capita expenditure does not have an insignificant positive effect on economic growth in the DIY Province. The development of MSMEs does not have a positive influence on economic growth in the DIY Province. Economic growth has a significant negative effect on poverty in the DIY Province. Economic growth has a significant negative effect on unemployment in DIY Province.

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