

# Determinants of Economic Growth in the Kedu Residency Period 2010-2019

Luthfiana Riski Dewanti<sup>1\*</sup>, Gentur Jalunggono<sup>2</sup>

<sup>1,2</sup> Economics Development Department, Faculty of Economics, University of Tidar,  
Indonesia

## *Abstract*

*Economic growth is very important to measure economic progress as a result of national development. Several factors can be used in calculating economic growth. The purpose of this study is to analyze how the influence of Gross Regional Domestic Product (GRDP), Human Development Index (HDI) and total poor population on economic growth in the Kedu Residency. This research was conducted in districts or cities in the Kedu residency area for 10 years starting from the period 2010-2019. This study uses a fixed effect model. The analysis shows that the Gross Regional Domestic Product (GRDP) variable and the Human Development Index (HDI) together have a positive and significant effect on economic growth in the Kedu Residency. The variable of poor people has a positif and significant influence on economic growth in the Kedu Residency.*

**keywords:** *Gross Regional Domestic Product (GRDP); Human Development Index (HDI); Poor Population; Economic Growth; Fixed Effect Model*

**JEL Classification:** G32, C22

## Introduction

Economic growth is the development of activities in the economy that causes goods and services produced in the community to increase so that it will increase the prosperity of the community (Sukirno, 1994). According to Lincoln (1997), economic growth is defined as an increase in Gross Domestic Product regardless of whether the increase is greater or less than the population growth rate, and whether there is a change in the economic structure or not.

**Table 1. Average Economic Growth in the Kedu Residency for the 2010-2020 Period**

<b>Kedu Residency</b>	<b>Average Economic Growth (%)</b>
Magelang City	5,53
Magelang District	5,40
Purworejo	5,17
Wonosobo	4,74
Temanggung	5,04
Kebumen	5,50
Rata-Rata	5,23

Source : BPS (2020)

Based on table 1, it is known that Magelang City has the highest average among other regencies/cities, which is 5.53 percent, while Wonosobo Regency has the lowest average among other regencies/cities of 4.74 percent. However, in the Kedu Residency area, the difference is not too far between the existing regencies/cities. Overall, the average economic growth in the Kedu Residency area is 5.23 percent.

This study aims to analyze how the influence of Gross Regional Domestic Product (GRDP), Human Development Index (IPM) and the poor on economic growth in Kedu Residency. This research is structured to provide an overview of the factors that influence economic growth in Kedu Residency from 2010-2019.

## **Literature Review**

According to Todaro (2002) GRDP is the total value of all final outputs produced by an economy at the regional level, whether that is done by local residents or residents from other areas who live in the area. According to BPS, the HDI explains how the population can access development outcomes in terms of income, health, education, and so on. BPS also explained that poverty is seen as an inability from an economic point of view to meet basic food and non-food needs as measured from the expenditure side. So the poor are people who have an average monthly per capita expenditure below the poverty line. Nadia Ika Purnama (2016) in her research entitled "Analysis of the Effect of Economic Growth on Poverty Rates in North Sumatra" states that the results of economic growth have a negative and significant effect on poverty levels in the province of North Sumatra.

## **Research Methods**

### **Research Type**

This study uses a quantitative approach. The data used in this research is secondary data.

### **Research Time and Place**

This research was conducted in July 2020 for approximately one month. This research was carried out at home, because it was still during the COVID-19 pandemic to reduce traveling outside the house. Even though the scope is limited, the researcher still conducts this research guidance through online media.

### **Target or Research Subject**

The target of this research is to find out how the influence of independent variables on economic growth in the Kedu Residency area. The data used is secondary data. Data obtained from the Central Statistics Agency (BPS district/city). Through the official website of the district/city BPS, data were obtained covering districts. Magelang, Magelang City, Purworejo Dist., Wonosobo Dist., Temanggung Dist. and Kebumen Dist.

### **Procedure**

This study uses a quantitative approach. The research was carried out with the stages of preparation, data collection, data analysis and making a final report in the form of articles. Data is secondary which according to Sugiyono (2012) secondary sources are sources of data obtained by reading, studying and understanding through other media sourced from literature, books, and documents. The Central Statistics Agency (BPS) is the media that is the source of researchers in obtaining data.

### **Data, Instruments and Data Collection Techniques**

The data used is panel data, namely time series data for the last 10 years, namely 2010-2019 and 6 cross section data representing districts / cities in Kedu Residency. The results of the combination of time series and cross section data resulted in 60 observations.

According to Sugiyono, data collection can be done in various places and various sources and in various ways. When viewed from the location, it can be collected in the laboratory with experimental methods, at home with various respondents, and so on. When viewed from the source of the data, the data collection can use primary and secondary sources. Primary sources are data sources that directly provide data to data collectors, and secondary sources are sources that do not directly provide data to data collectors, for example through other people or through documents. In this study using secondary data sources that can be obtained through the official website of the Central Statistics Agency (BPS).

The data collection technique used in this research is documentation technique. According to Hamidi (2004) the documentation method is information that comes from important records both from institutions or organizations as well as from individuals. In this study, data documentation was collected from the official website of the district and city BPS in Kedu Residency.

### **Data analysis technique**

To analyze the data that has been collected, an econometric model will be used. This study uses panel data analysis which is processed using Eviews 10. Eviews 10 is widely used to analyze statistics and econometrics. The data used is time series data for the last 10 years, namely 2010-2019 and 6 cross section data representing districts/cities in Kedu Residency. The results of the combination of time series and cross section data resulted in 60 observations.

Before performing the panel data regression test, several steps are needed to determine the best model to be used. There are two minimal stages that must be passed in

order to determine the best model for panel data regression, namely by using the Chow test and the Hausman test. Based on the Chow test to find the best model between the common effect model (CEM) or the fixed effect model (FEM), the result is that the fixed effect model (FEM) is the best model. Furthermore, the Hausman test was carried out to find the best model between the random effect model (REM) or the fixed effect model (FEM) to obtain the fixed effect model (FEM) as the best model. So the fixed effect model (FEM) is the best model that can be used in this study.

The fixed effect model (FEM) method will be able to answer the purpose of this study, namely to analyze how the influence of independent variables on economic growth in the city/district area of Kedu Residency. The analytical equation model used in this paper is as follows:

$$Y = \beta_0 + b_1 \text{PDRB} + b_2 \text{IPM} + b_3 \text{JPM} + \varepsilon \dots\dots\dots (1)$$

where:

Y = Pertumbuhan Ekonomi

$\beta_0$  = Constant

PDRB = Produk Domestik Regional Bruto (PDRB)

IPM = Indeks Pembangunan Manusia (IPM)

JPM = Jumlah Penduduk Miskin

$\varepsilon$  = *error term*.

## Results and Discussions

**Tabel 2. Panel Data Regression Analysis Results with Fixed Effect Model**

Dependent Variable: PERTUMBUHAN\_EKONOMI

Method: Panel Least Squares

Date: 07/24/20 Time: 18:31

Sample: 2010 2019

Periods included: 10

Cross-sections included: 6

Total panel (balanced) observations: 60

Variable	Coefficient	Std. Error	t-Statistic	Prob.
PDRB	0.219315	0.055033	3.985152	0.0002
IPM	1.313022	0.455084	2.885229	0.0059
PENDUDUK_MISKIN	0.026306	0.013006	2.022614	0.0488
C	-3.324055	1.094206	-3.037871	0.0039

  

Effects Specification			
Period fixed (dummy variables)			
R-squared	0.487393	Mean dependent var	0.715885
Adjusted R-squared	0.356514	S.D. dependent var	0.046387
S.E. of regression	0.037211	Akaike info criterion	-3.555306
Sum squared resid	0.065078	Schwarz criterion	-3.101532
Log likelihood	119.6592	Hannan-Quinn criter.	-3.377810
F-statistic	3.724008	Durbin-Watson stat	2.169636
Prob(F-statistic)	0.000565		

Source : Self-process (2020)

### Analysis of Determination

Analysis of the coefficient of multiple determination (Adjusted R-Squared/R<sup>2</sup>) is 0.356514. This shows that there is an influence between the variables GRDP (X1), HDI (X2) and the Poor (X3) on the dependent variable, namely Economic Growth with a determination number of 0.356514. So the variables X1, X2, and X3 can predict Y by 35 percent, the remaining 65% percent is influenced by other variables outside the model.

### Simultaneous Significance Test (F Statistics Test)

This test is to see the significance of the model owned. It is said to be Goodness of fit (feasibility of the model) if the prob t-Statistic value of the regression test results is less than alpha (< 0.05). In the test, it was obtained that 0.000565 < 0.05 was declared significant, in which the independent variables jointly affected the dependent variable.

### **Individual Parameter Significance Test (Test Statistical t)**

The test used to test the hypothesis of each independent variable owned. What is seen is the value of t-statistics and probability values from the results of the regression test. It is said that the variable is significant if the prob t-statistic value of the regression test results is less than alpha ( $<0.05$ ). In the test obtained: The GRDP variable has  $0.0002 < 0.05$  which means that the variables used have a positive and significant effect on the dependent variable. The HDI variable has  $0.0059 < 0.05$  which means that the variables used have a positive and significant effect on the dependent variables. The variables POPULATION POOR has  $0.0488 < 0.05$ , which means that the variables used have a positive and significant effect on the dependent variable.

### **Conclusions**

It can be concluded that the variables of Gross Regional Domestic Product (GRDP), Human Development Index (IPM) and the number of poor people together affect the variable of Economic Growth in Kedu Residency. Variable Gross Regional Domestic Product (GRDP) has a positive and significant effect on economic growth in Kedu Residency. The Human Development Index (HDI) variable also has a positive and significant effect on economic growth in Kedu Residency. Likewise, the number of poor people has a positive and significant effect on economic growth in Kedu Residency. So it can be interpreted that the increasing GRDP and HDI will have a positive effect on increasing Economic Growth in the Kedu Residency. However, the results obtained from the processed Number of Poor People are positive and significant, which is different from the results obtained from Nadia Ika Purnama (2016) in her research entitled "Analysis of the Effect of Economic Growth on Poverty Levels in North Sumatra" which states that the results of economic growth have a negative and negative effect. significantly to the poverty rate in the province of North Sumatra. So, due to the influence of the independent variable 35 percent on Economic Growth, the Number of Poor Population variable which has a positive and significant effect has a small effect on Economic Growth in Kedu Residency because the results are not in accordance with the theory which states that the Number of Poor Population has a negative effect on Economic Growth.

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