The Effect of Education Levels, Inflation and Minimum Wage on Community Income in Jember District

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Abstract
This study focuses on an effort to see. Endogenous growth theory is an economic model that optimizes the internal potential of a country. This model prioritizes human resources with the strength of science, natural resources, technology and institutional assets. In addition, the concept of Human Capital assumes that education is a profitable investment in the future. Education is assumed to be a non-physical investment that must be aligned with physical capital. This is because non-physical capital also has an important role in determining the production process. This non-physical capital investment is believed to be a very profitable investment in the future. The approach used in this research is the quantitative approach. The quantitative method is a research method based on the philosophy of positivity. The region of Jember Regency which has the characteristics of agricultural areas, we will review whether it can optimize its economic growth which comes from endogenous factors. Based on the research results, the conclusion is that: a. The education level variable has a positive and significant effect on the income variable. b. The inflation variable has a negative and significant effect on the income variable. and c. The minimum wage variable has a positive and significant effect on the income variable. Thus it can be said that endogenous variables can increase economic growth in the Jember Regency area.

Key word: Endogenous Economic Model, Income, Education, Inflation, Wages in Jember Regency

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I. Background
Economic development in a region cannot be separated from economic growth. According to Budiono in Soesatyo (2011) economic growth is a process of increasing per capita output in the long term, namely a process where there is an increase in gross national product or real national income. In this case, economic growth is needed in order to improve the standard of living and welfare of society in general. Likewise with the goal of regional development, namely the realization of regional economic growth, to create prosperity and prosperity in a region.

The income of the people in Jember Regency itself comes from several sectors, ranging from the industrial sector, the agricultural sector, the business sector, the trade sector, and the private sector and government. The source of income for each individual depends on the location of the individual. People in the southern region of Jember depend a lot on the marine sector, people in the northern, eastern and western sectors, depend on income from the agriculture and livestock sector, especially in rural areas. Unlike the case with urban areas, which on average depend on income in the business sector and offices. Indeed, the geographical conditions of the region determine the profession and income of each community, the Central Bureau of Statistics.

One way to see the level of income of a country by calculating income per capita, income per capita (GDP per capita) is the amount of average income of the population in a country, which is obtained from sharing the national income of a country with the country’s population, Ministry of Education and Culture (2018). Usually, per capita income is often referred to as the gross domestic product (GDP) per capita. So to see the average income of the people in Jember Regency, you can use the Gross Regional Domestic Product of PDRB per capita, namely the value of GRDP divided by the total population of Jember Regency.

Table 1. GDP, Total Population and Percapita Income, Based on the Effective Price of Jember Regency by Expenditure, 2015 - 2019 (Rp. Billion)
The Effect of Education Levels, Inflation and Minimum Wage on Community Income...

<table>
<thead>
<tr>
<th>No</th>
<th>Year</th>
<th>PDRB (X 1M Rp)</th>
<th>Total Population (person)</th>
<th>Per Capita Income (Rp)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2015</td>
<td>56.377.37</td>
<td>2.407.120</td>
<td>23.421.09</td>
</tr>
<tr>
<td>2</td>
<td>2016</td>
<td>62.512.68</td>
<td>2.419.000</td>
<td>25.842.36</td>
</tr>
<tr>
<td>3</td>
<td>2017</td>
<td>67.389.72</td>
<td>2.430.190</td>
<td>27.730.23</td>
</tr>
<tr>
<td>4</td>
<td>2018</td>
<td>72.135.71</td>
<td>2.440.710</td>
<td>29.555.22</td>
</tr>
<tr>
<td>5</td>
<td>2019</td>
<td>77.234.24</td>
<td>2.450.670</td>
<td>31.515.56</td>
</tr>
</tbody>
</table>

Note: * temporary figures
** very provisional figures
Source: BPS Jember Regency, 2020

In Prof. endogenous economic growth model. AsepSaefudin in (yyb.com, 2019) explains that endogenous growth theory is an economic model that optimizes the internal potential of the country. This model prioritizes human resources with the strength of science, natural resources, technology and institutional assets. In addition, the concept of Human Capital assumes that education is a profitable investment in the future. Education is assumed to be a non-physical investment that must be aligned with physical capital. This is because non-physical capital also has an important role in determining the production process. This non-physical capital investment is believed to be a very profitable investment in the future.

In a country is believed to be very influential on a person's skills, behavior and attitudes, some of these things should have an influence on a person's income, meaning that on average, the higher a person's education will allow that person to get a higher income (Tarigan, 2006).

Basically wages are the main source of a person's income, therefore wages must be sufficient to meet the needs of workers and their families fairly. Wage is an acceptance as a reward from employers to employees for a job or service that has been performed. The wage standard is determined on the basis of an agreement or legislation and is paid on the basis of a work agreement between the employer and the employee, including benefits, both for the employee himself and for his family. wages paid by employers are in accordance with or equal to the work effort (productivity) given to entrepreneurs, Sumarsono in Aprilia (2016).

The district minimum wage in Jember continues to increase, during 2009 - 2018 the highest increase in minimum wages when viewed from the amount occurred in the year reached 19%, second in 2008 by 19%. However, when viewed from the amount of increase in the minimum wage, the highest increase occurred in 2015 amounting to Rp. 190,500, - second in 2014 amounting to Rp. 178,050, -. Each year the province determines the minimum wage based on the standard of Decent Living Needs (KHL).

Based on the background of the problems described above is the basis for the authors to conduct this research, so the authors decided to give the title of this study with "The Effect of Education Level, Inflation, and Minimum Wages on Community Income in Jember Regency".

II. Literature Review

a. Definition of Human Capital

In the implementation of the development of a region, economic growth indicators are always used as benchmarks for the development of an area within a certain period. The economic growth that occurs cannot be separated from the role of investment, usually investments made in the form of physical and financial capital. However, in its application, investment is not only in the form of physical and financial capital, an increase in human resources is also a profitable investment for a region. Because in addition to financial capital, there is also other capital that can increase economic growth, namely human capital. The application of the concept of human capital can be in the form of education and training (Saputri, 2014).

The concept of human capital has long been applied in improving the quality of human resources. Education as one of the human capital instruments is considered not only to increase knowledge but also to increase the skills and skills of the workforce, so as to increase productivity. Increasing work productivity will have a positive impact on the economic growth of a region as well as an increase in individual income from the region (Widiastuti, 2018).

b. Definition of Education

Education comes from the word pedagogy (education) which comes from Greek. Pedagogy and pedagogy consist of two words, namely paedos (child) and agoge (guiding). From that point of view education can be defined as someone's activity in guiding and leading children to optimal growth and development so that they can stand alone and have responsibilities. In a simple and general sense the meaning of education is a
human effort to develop both physical and spiritual potentials in accordance with the values that exist in society and culture (Soesatyo, 2011).

Based on some of the definitions above, we can conclude that education is an effort to empower and direct individuals to be able to apply and live life well, to be able to adapt to all the dynamics of life, both in social, economic, legal, and so on.

c. School Enrollment Rate (APS)

According to the Central Bureau of Statistics in Elfarabi (2018) the school participation rate is a description of the extent to which the level of absorption of formal education, in the BPS school participation age grouping uses four age ranges, namely: (1) Age 7-12 years for primary schools, (2) age 13 -15 years old for junior high school, (3) 16-18 years old for senior high school and (4) 19-24 years old for tertiary education.

d. Definition of Inflation

According to the Central Statistics Agency in Jundi (2014), inflation is an increase in the price of goods and or services in general in a region or country where these goods and services are the basic needs of the community or a decrease in the selling power of currency in a region or country.

According to Putong in Wicaksono (2016) Inflation is an increase in commodity prices in general which is caused by the incompatibility between the commodity procurement system program and the level of income owned by the community. Inflation is the tendency of prices to increase generally and continuously over time. an increase in the price of one or two goods alone cannot be called inflation unless the increase extends (results in an increase) to the other goods. Sukirno in Wicaksono (2016) states that inflation can be defined as a process of increasing prices prevailing in an economy.

The impact of inflation, according to Gofur in Aravik (2018) Inflation that occurs will have an impact on economic activity in society, the following are the impacts caused by inflation, namely: a. Towards Consumers, Producer Inflation causes the prices of goods consumed to rise, while people's income does not increase. This harm affects consumption patterns, among others: 1. The quantity of goods consumed is reduced. 1. transfer of brands of consumed goods, b. Towards producers. It can be seen that the desire to produce has decreased this is due to: 1. an increase in raw material prices, 2. the interest rate makes it difficult for companies to expand production, 3. the emergence of an attitude from speculative producers, c. On the Distribution The impact of inflation on the distribution of people's income is disrupted, because people with a fixed income experience a decline in real income.

e. Minimum wage

According to the Central Statistics Agency in Jundi (2014) the minimum wage is the minimum wage that must be paid by companies to workers in accordance with the provisions of the laws and regulations in force in each region (province). The minimum wage aims to raise the status of the population.

Types of Minimum Wages. Minimum wages are initially determined sectorally and nationally by the Ministry of Manpower. However, in 2001 the minimum wage was set by each province. The minimum wage itself can be divided into two, namely: a. Regional minimum wage, is a monthly wage consisting of basic wages and fixed allowances for workers at the lowest level and with a working period of less than one year which applies in a certain area (district / city), b. Sectoral minimum wage, is the wage applicable in a province based on sector capability.

Minimum Wage Components, according to Sumarsono in Sapitri (2018), there are three components that are considered to affect the amount of the minimum wage, namely as follows: a. Minimum Physical Needs, Minimum Physical Needs (KFM) b. Consumer Price Index. c. Regional Economic Growth

f. Definition of Income.

According to economics, income is the maximum value that can be consumed by a person in a period by expecting the same condition at the end of the period as in the original state. This definition focuses on the quantitative total expenditure on consumption during a period. In other words, income is the amount of assets at the beginning of the period plus all the results obtained during a period, not just consumed. Mankiw N. Gregory in Macroeconomic Theory (2003). In another opinion, it is said that income is the amount of income received by residents for their work performance during a certain period, whether daily, weekly, monthly or annually.

Based on the theory and definition of income above, we can conclude that income or what can be called income is a basic need of an individual in society. A good income will not only enable a person to meet their needs but also provide a sense of security for their family and welfare. In addition, individual income will also affect the level of economic growth, both nationally and regionally, at the national and regional scale.

Gross Regional Domestic Product (GRDP), a. Understanding GRDP, according to the Central Statistics Agency in Natha (2015) Gross Regional Domestic Product (PDRB) is the amount of added value generated by
all business units in a certain area and can also be said as the sum of the final (net) value of goods and services produced by all economic units. GRDP data, both on the basis of current and constant prices, is an important indicator used to determine the economic condition of an area in a period. b. Types of GRDP,

Gross Regional Domestic Product Per Capita (PDRB Per capita), Income Per Capita (GDP per capita) is the amount of average income of the population of a country, which is obtained from dividing the national income of a country with the total population of that country. Usually, the income per capita is often referred to as the Gross Domestic Product Per capita (GDP per capita) or it can also be called the Gross Domestic Product Per capita (GDP per capita). Meanwhile, Gross Regional Domestic Product per capita (GRDP per capita) is obtained from dividing GDP based on prevailing prices by mid-year population, BPS. From the PDRB per capita calculation, we can see how much income the community has received in an area, from newborn babies to vulnerable parents. Below is how to calculate GRDP per capita:

PDRB Per Capita = (GRDP in Year X) / (Total Population in Year X)

GRDP per capita is one of the indicators used to measure the prosperity of an area. If income per capita has increased, it will directly encourage an increase in purchasing power or consumption. When people have high purchasing power it also directly increases the production of goods and services.

III. Research Framework

Information:

a. (X1) is the level of education (independent variable), b. (X2) is the Inflation Rate (Independent Variable), c. (X3) is the Regency Minimum Wage (Independent Variable). d. (Y) represents Community Income (Bound Variable). e. The perfect arrow shows the effect of the independent variable on the dependent variable partially. 
f. The dashed arrow shows the effect of the independent variable on the dependent variable simultaneously.

IV. Research Methods

a. Type of research, the approach used in this research is the quantitative approach. The quantitative method is a research method based on the philosophy of positivity, used to research on certain populations or samples, data collection using research instruments, quantitative / statistical data analysis, with the aim of testing the hypothesis that has been applied (Sugiyono).

The use of quantitative methods because the data used is in the form of numbers which are then processed using statistical analysis to analyze the effect of education on people's income in Jember district.

b. Unit of Analysis, In this study, there are four variables used, namely people's income as the dependent variable, and the level of education, inflation and minimum wages as independent variables. The data used are secondary data, based on published data from the Central Statistics Agency (BPS) of Jember Regency, and various other literature both online and offline. The following data is used, namely the school participation rate (APS), Regency Minimum Wage, Annual Inflation and Gross Regional Domestic Product (PDRB) per capita of Jember Regency from 2005 to 2018.

c. Population and Sample, The population or object in this study is data on education, inflation, minimum wages and income in Jember Regency, a set of samples used are education data, inflation, minimum wages and income of the people of Jember Regency from 2005 to 2018.

d. Data analysis method

Multiple Linear Regression Analysis

Multiple Linear Regression Analysis is used to measure the effect of more than one independent variable on the dependent variable (Pertiwi, 2015). Below is a multiple linear regression equation:

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \]

Where:

- \( Y \) = income / GDP per capita in rupiah.
- \( X_1 \) = education / school enrollment rate in percent.
- \( X_2 \) = annual inflation / inflation rate in percent.
- \( X_3 \) = annual minimum wage / UMK in rupiah.
- \( \beta_0 \) = the value of income (Y) when \( X_1 = 0, X_2 = 0 \) and \( X_3 = 0 \).
- \( \beta_1 \) = the coefficient of the effect of education on income.
- \( \beta_2 \) = the coefficient
of the effect of inflation on income, \( b_3 = \) the coefficient of the effect of minimum wages on income, \( e = \) error / bully's fault

Classic assumption test

In the classical assumption test is used. a. Normality test, the normality test is carried out to determine whether the data used is normally distributed or not. b. Multicollinearity test, aims to test the regression model where there is a correlation between variables. This can be seen in the Variance Inflation Factors output. If the value of VIF \(< 10\) then multicollinearity does not occur otherwise if the VIF value \(> 10\) then multicollinearity occurs (Khotimah, 2018). c. Heteroscedasticity The Heteroscedasticity test was conducted to test whether in a regression model there was an inequality of variants from one residual to another. If the variance of the residual is fixed, it is called homoscedastic, if the variance is different it is called heteroscedasticity. One way to detect heteroscedasticity is by using the White Test, to see whether there is a heteroscedasticity problem, provided that if the Chi-Square Probability value is \(< 0.05\) then there is heteroscedasticity and if the Chi-Square probability value is \(> 0.05\) then it does not happen. heteroscedasticity (ibid, 2018). d. Autocorrelation Test, Autocorrelation Test is used to detect any correlation between the disturbance variables of one observation with other observations at different times. Autocorrelation is often found in time series data (Islamia, 2017). In this study, to detect Autocorrelation using the LM test or known as the Breusch Godfrey method, the terms of the LM test are that if the Chi-Squared Probability \(< 5%\) then autocorrelation occurs, on the other hand, if the Chi-Squared Probability \(> 5%\) then autocorrelation does not occur (Imsar, 2018).

Statistic Test

a. Simultaneous Test (F test), is used to test the feasibility of a model. Simultaneous test is used to determine how much influence the independent variables simultaneously have on the dependent variable. Testing Criteria: By using the level of significance (\( \alpha = 5\%)\), the test criteria:

1. If the probability \( F_{\text{count}} \leq \) significance level (\( \alpha = 5\%)\), then \( H_0 \) is rejected and \( H_a \) is accepted, it means that there is an influence between the independent variables together on the dependent variable;
2. If the probability \( F_{\text{count}} > \) significance level (\( \alpha = 5\%)\), then \( H_0 \) is accepted and \( H_a \) is rejected, it means that there is no influence between the independent variables simultaneously on the dependent variable.

b. Partial test (t test) t test or known as partial test is a test that aims to test how the influence of each independent variable (independent) individually (individually) affects the dependent variable (dependent). In other words, to find out which independent variable can explain the changes that occur in the dependent variable in real terms (Syafitri, 2018).

c. The coefficient of determination (R-Square / R2). In conducting a regression analysis we need to know how good / good the regression line is in explaining the data, to explain this we use an analysis tool called the coefficient of determination (R2). R2 is used to show the percentage of variation and the independent variable and can be explained by the variation of the dependent variable. (Syafitri, 2019). To find out whether the coefficient of determination is good or not good, it can be seen from the value between 0-1. If the R2 value is getting closer to zero, the regression line is not good, meaning that the independent variable is less able to explain the real data, and vice versa. The coefficient of determination is used to see how much influence the independent variables, namely (number of graduates, school enrollment and literacy rates) together are able to provide an explanation of the dependent variable (income of the people of KabupatenJember).

4. Hypothesis

Based on the problems that have been described in the research background and problem formulation in the introduction, the researcher states that there is an assumption that is provisional in nature (Hypothesis), namely:

1. The level of education has a significant effect on people's income in Jember Regency.
2. The inflation rate has a significant effect on people's income in Jember Regency.
3. The minimum wage has a significant effect on people's income in the district of Jember.

5. Variables and Operational Definitions

Research variable is an attribute or nature or value of people, objects or activities that have certain variations that are determined by the researcher to be studied and then draw conclusions (Sugiyono). The variables used in this analysis consist of the dependent variable (Y) and the independent variable (X). The dependent variable is community income, while the independent variable is education level, inflation and minimum wages. The operational definitions used are as follows:

a. Dependent Variable (Y), Income is Gross Regional Domestic Product (PDRB) per capita of Jember Regency from 2005 to 2018,
b. Independent Variable (X) There are several independent variables used, namely: 1. Education level (X1) is the Pure School Participation Rate (APS) at the junior high school level aged 13-15 years. APS is a measure of the absorption of educational institutions towards the school age population. 2. Inflation (X2) is the Annual Inflation Rate (INF), namely the tendency to increase in prices for goods and services in general, which takes place continuously. 3. Minimum Wage (X3) is the Regency Minimum Wage (UMK), namely the minimum wage that applies to all districts / cities in a province.
V. Results of Analysis and Discussion

a. Multiple Linear Regression Analysis

Below are the results of Multiple Linear Regression Analysis, where the data processing uses Eviews 10 Software:

Based on the results of the multiple linear regression analysis above, we can make the following equation:

\[
GRDP = -25531473 + 303022APS - 753183INF + 13,09087UMK
\]

From the same time above, we can understand that: a. The constant value is -25531473 which means that if the variable level of education, inflation and the minimum wage is equal to 0, the income of the people in Jember Regency will decrease by -25531473 rupiah. b. The Coefficient Value of Education Level is 303022, which means that if the Education variable increases by 1%, the income of the people in the Regency of Jember will increase by 303022 rupiah. c. The value of the inflation coefficient is -753183, which means that if the inflation variable increases by 1%, the people's income will decrease by 753183 rupiah. d. The Minimum Wage Coefficient Value is 13.09087, which means that if the minimum wage variable increases by 1%, the people's income will increase by 13.09087 rupiah.

b. Classical Assumption Test Results (econometrics)

Normality test

Below are the results of the Normality test: Based on the results above, it is known that the value of the probability is greater than the significance level \( \alpha = 5\% \) or 0.842002 > 0.05, it can be concluded that the data used in the study are normally distributed.

Multicollinearity Test

This is the result of the multicollinearity test: Based on the results of the multicollinearity test above, where the value of Centered VIF <10, we can conclude that there is no multicollinearity. The results above show that: a. The education level variable (APS), the resulting VIF value is 1.710065, smaller than 10, it can be concluded that there is no multicollinearity in the education variable. b. In the Inflation variable (INF), the resulting VIF value is 1.449462 which is smaller than 10, so it can be concluded that there is no multicollinearity in the inflation variable. c. The minimum wage variable (UMK), the resulting VIF value is 1.459282, is smaller than 10, so it can be concluded that there is no multicollinearity in the minimum wage variable.

Heteroscedasticity Test

The following are the results of the heteroscedasticity test: Based on the above results it is known that the value of the Chi-Square is greater than the significance level, namely \( \alpha = 5\% \) or 0.3291 > 0.05, it can be concluded that heteroscedasticity does not occur.

Autocorrelation Test

The following are the results of the autocorrelation test: Based on the above results it is known that the value of the Chi-Square is greater than the significance level, namely \( \alpha = 5\% \) or 0.7652 > 0.05, it can be concluded that there is no autocorrelation.

c. Statistical Test Results

Simultaneous Test Results (F test)

Based on the results of the regression analysis above, we can see the value of the F-statistic of 74.93051 with a probability value of 0.000000, the probability value is smaller than the specified significance level of 5% or 0.000000 <0.05, so we can mean that the variable level of education, inflation and the minimum wage jointly influence the income variable of society.

Partial Test Result (t test)

Based on the results of the regression analysis above, we can see the results of the statistical t test for each of the independent variables as follows: a. Education level, the test results obtained by the t-statistic value for education level (APS) is 3.830376 with a probability of 0.0033, so we can conclude that the education level variable has a positive and significant effect on the income variable. b. Inflation The test results show that the t-statistic value for inflation (INF) is -2.728916 with a probability of 0.0212, so we can conclude that the inflation variable has a negative and significant effect on the income variable. c. Minimum Wage, the t-statistic value for the minimum wage (UMK) is 10.81753 with a probability of 0.0000, so we can conclude that the minimum wage variable has a positive and significant effect on the income variable. d. Result of the Coefficient of Determination (R-Square / R2)

The coefficient of determination is used to determine how well the regression line explains the data. The Adjusted R-Square value in the regression analysis above is 0.944632 or 94.4%, the value of the Adjusted R-Squared is closer to number 1 than 0, this means that the variables of education level, inflation and minimum wages can explain people's income in Jember Regency, amounted to 94.4% while the remaining 5.6% is explained by other factors.
VI. Conclusion

Based on the results of the analysis and discussion that the researcher has described, it can be concluded that: a. The education level variable has a positive and significant effect on the income variable. b. The inflation variable has a negative and significant effect on the income variable. c. The minimum wage variable has a positive and significant effect on the income variable.

VII. Suggestions

Based on the results of the research and the conclusions obtained, the suggestions given by the author are as follows: a. The school participation rate for levels above primary school needs an increase because there is a decrease at each level, the average participation at the SMA level is 51%, meaning that only 51% of children in the 16-18th age range are educated, the remaining 49% are not well off, continue to high school level. The government must be able to provide a stimulus so that educational participation will increase, and we must also be aware that education is very important, because education is an invisible asset that will benefit us in the future. b. If there is high inflation in a certain year, the government in this case must think about the effect of the inflation, where if there is inflation it will have a negative impact on the real income of the community. There must be solutions to help people meet their needs.

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