

## Human Capital Analysis Affects Economic Growth

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### Abstract

*This study focuses on finding out whether human capital, which is an indicator of the quality of human resources, has a significant effect on economic growth. This study uses several indicators, including life expectancy, literacy, consumption, and the average length of schooling. One of the inhibiting factors for economic growth is poverty, so that the Government has implemented various programs aimed at alleviating poverty. This is quantitative research. The data used is secondary data obtained from the Central Statistics Agency (BPS) of East Java Province. The data obtained includes life expectancy, per capita consumption, average length of schooling, literacy rates, poverty, and economic growth in East Java during the 2010-2015 period. The results showed that Life Expectancy, Per capita Consumption, Average Length of Schooling, and Poverty had no significant effect on economic growth in East Java Province. However, literacy rate had a significant effect on economic growth in East Java during the 2010-2015 period.*

### Keywords

human capital; growth; economic growth; measure of welfare



## I. Introduction

Development is a process of change towards a better direction which is carried out continuously to create a just, competitive, advanced and prosperous Indonesian society within the Unitary State of the Republic of Indonesia. Development must be directed in such a way that each stage is closer to the goal. The fourth paragraph of the 1945 Constitution states that the main task of the government of the Republic of Indonesia is "to promote public welfare, educate the nation's life and create social justice for all Indonesian people". This means that people's welfare is the right of every Indonesian citizen and is under the responsibility of the State.

Human development is defined as a process for the expansion of options for the population through empowerment efforts that prioritize the improvement of basic human abilities so that they can fully participate in all fields of development of the United Nation Development Program (UNDP). The importance of humans in development is that humans are seen as the subject of development, which means that development is carried out for the benefit of humans or society.

Poverty alleviation is one of the Millennium Development Goals (MDGs) which is an agreement between the heads of state and representatives of 189 countries of the United Nations (UN) which began to be implemented in September 2000. One of the targets of this goal is to reduce the percentage of the population whose income is less than 1 dollar per day as much as 50 percent from 1990 to 2015, with an indicator of the proportion of the population living below the national poverty line.

The productivity growth of a region is one measure of an increase in the output of an area apart from capital, resources and economic progress. The definition of productivity is the amount of goods and services produced by a worker for each working hour (Mankiw, 2005). Theoretically, the factors that affect productivity are physical capital, natural resources, and technological advances. Natural resources are raw materials and additional materials in production activities. Technological progress is an understanding of producing goods and services that are used to produce better products.

In research conducted by Islam et al. (2016) stated that the variables of education and human capital have a relationship with economic growth. Other research conducted by Ismail, Saukani, & Bakar (2014) and Ismail & Yussof (2010) shows that there is a positive relationship between education and human capital and economic growth in Malaysia. Based on these phenomena, this research focuses on analyzing the factors that influence economic growth with basic data taken from case studies in East Java province from 2010 to 2015.

## II. Research Methods

This study uses a quantitative research approach. Quantitative research is a study that uses a deductive-inductive approach. This approach departs from a theoretical framework, the ideas of experts, and the understanding of researchers based on their experiences. It is then developed into problems that are proposed to obtain justification or rejection in the form of field empirical data documents. The purpose of this study is to determine how much the above-mentioned factors affect economic growth.

The data used in this research is secondary data. Secondary data is data that is collected indirectly from the source. It has usually been collected by data collection agencies and published to the public. Secondary data in this study were obtained from Central Statistics Agency (BPS) of East Java Province. This data is then processed using Microsoft Excel. This research is focused on the provincial level, with the aim of obtaining an overview of the effect of the Human Development Index and poverty on economic growth. The data in this study were also obtained from the Regional Development Agency of East Java Province, and other literatures that discuss the relevant research material.

### Analysis Technique

To determine the effect of life expectancy, per capita consumption, average length of schooling, and literacy rates on economic growth in East Java, a multiple linear statistical test model was used. Multiple linear regressions test is employed to test whether the relationship of more than two variables is significant or not.

Multiple linear regression test is a linear regression that involves more than two variables, namely one dependent variable (Y) and more than two independent variables (X1, X2, ... Xn). This test is used to analyse the relationship between independent variables in this case life expectancy (X1), consumption (X2), average length of schooling (X3), literacy rate (X4), and poverty (X5) and the dependent variable, economic growth (Y). All of these variables can be summarized in a functional relationship as follows Hasan (2008, 37):

$$Y = f(X_1, X_2, X_3, X_4)$$

The functional relationship above can be formulated in a linear function as follows Hasan (2008, 38):

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \mu_i$$

Note:

Y = economic growth (per cent)

X<sub>1</sub> = life expectancy (year)

X<sub>2</sub> = consumption (per cent)

X<sub>3</sub> = average length of schooling (year)

X<sub>4</sub> = literacy rates (per cent)

X<sub>5</sub> = poverty (per cent)

β<sub>0</sub> = constant

β<sub>1</sub>, β<sub>2</sub>, β<sub>3</sub> = parameters to be estimated to obtain an overview of each variable

μ<sub>i</sub> = error term

Meanwhile, to determine the level of significance of each regression coefficient of the independent variable on the dependent variable, statistical tests below were performed:

### 1. Analysis of determination coefficient (R<sup>2</sup>)

To determine the magnitude of independent variables' influence, namely life expectancy (X<sub>1</sub>), consumption (X<sub>2</sub>), average length of schooling (X<sub>3</sub>), literacy rates (X<sub>4</sub>), and poverty (X<sub>5</sub>) on economic growth (Y), analysis of determination coefficient (R<sup>2</sup>) is used.

If the coefficient of determination (R<sup>2</sup>) is small or close to zero, it means that the ability of the independent variables to explain the variation in the dependent variable is very limited. Meanwhile, R<sup>2</sup> value which is close to one means that the independent variables provide almost all the information needed to predict the dependent variables.

However, there are times when the use of the coefficient of determination is biased against one independent variable that is included in the model. Every addition of one independent variable will cause an increase in R<sup>2</sup>, regardless of whether the variable has a significant effect on the dependent variable (significant t-value).

### 2. T-test

This test is used to determine whether each independent variable has a significant influence on the dependent variable. In other words, this is to find out whether each independent variable can explain the changes that occur in the dependent in real terms.

To assess the effect of individual independent variables on the dependent, the following hypotheses can be seen: H<sub>0</sub>: β<sub>1</sub> = 0 has no effect, H<sub>1</sub>: β<sub>1</sub> > 0 has a positive effect, H<sub>1</sub>: β<sub>1</sub> < 0 has a negative effect. This is where β<sub>1</sub> is the coefficient of the 1st independent variable, namely the value of the hypothesis parameter. Usually, the value of β is considered zero, meaning that there is no effect of variable X<sub>1</sub> on Y. If the t-count is greater than the t-table, then H<sub>0</sub> is accepted (significant) and if the t-count is less than the t-table, H<sub>0</sub> is rejected (not significant). The t test is used to make a decision whether the hypothesis is proven or not, with the significant level of 5%.

### III. Results and Discussion

In order to spur economic growth in East Java, human development is necessary. Human development aims to open the widest possible opportunity for everyone to live a long and healthy life, to be educated and skilled and to have the income necessary to live. The quality of human capital can be seen from health education and / or purchasing power parity. Improving the quality of human capital can help reduce inequality between regions.

#### 3.1 Population

**Table 1.** Population of Districs in East Java Province Year 2010-2015 by Gender (male)

No	Regency/City	Male					
		2010	2011	2012	2013	2014	2015
1	Pacitan	264,112	265,805	266,195	267,412	268,183	268,896
2	Ponorogo	427,592	430,236	430,282	431,382	432,578	433,504
3	Trenggalek	335,153	337,298	338,403	339,709	341,094	342,397
4	Tulungagung	482,811	485,907	489,322	492,287	495,083	497,698
5	Blitar	559,475	563,052	565,689	568,596	571,303	573,707
6	Kediri	752,852	757,664	763,091	766,696	772,006	776,212
7	Malang	1,229,773	1,237,632	1,250,780	1,260,414	1,269,613	1,278,511
8	Lumajang	491,521	494,673	496,499	498,787	500,904	502,920
9	Jember	1,146,856	1,154,204	1,162,587	1,167,801	1,176,515	1,182,817
10	Banyuwangi	774,448	779,403	782,701	787,384	789,924	793,018
11	Bondowoso	358,888	361,190	364,026	366,605	368,505	370,588
12	Situbondo	315,912	317,938	320,476	322,716	324,673	326,500
13	Probolinggo	534,986	538,417	544,183	548,391	552,389	556,301
14	Pasuruan	749,440	754,237	764,012	769,705	777,120	783,410
15	Sidoarjo	975,681	981,916	1 012,492	1,029,003	1 046,596	1,063,629
16	Mojokerto	512,334	515,611	523,895	529,192	534,516	539,613
17	Jombang	598,280	602,108	606,499	613,296	613,827	617,194
18	Nganjuk	505,687	508,923	510,998	513,398	515,597	517,712
19	Madiun	326,907	329,000	329,776	331,417	332,521	333,517
20	Magetan	302,208	304,146	303,811	304,595	305,018	305,586
21	Ngawi	398,567	401,123	400,475	401,808	404,583	405,113
22	Bojonegoro	598,365	602,196	604,122	604,691	608,991	611,313
23	Tuban	552,593	556,132	559,874	563,306	566,279	569,324
24	Lamongan	572,838	576,513	574,890	576,208	576,396	576,812
25	Gresik	583,721	587,457	600,224	607,893	615,283	622,824
26	Bangkalan	433,206	435,991	442,816	447,189	451,601	455,710
27	Sampang	427,896	430,641	440,028	445,487	451,110	456,394
28	Pamekasan	386,951	389,433	397,113	401,993	406,307	410,800
29	Sumenep	495,896	499,086	501,980	504,712	507,430	509,791

City							
30	Kediri	133,884	134,741	136,315	137,513	138,578	139,493
31	Blitar	65,441	65,861	66,691	67,290	67,802	68,401
32	Malang	404,553	407,144	411,101	415,101	416,982	419,713
33	Probolinggo	106,915	107,600	109,328	110,486	111,727	112,689
34	Pasuruan	92,370	92,961	94,219	95,010	95,817	96,598
35	Mojokerto	59,127	59,506	60,278	60,704	61,282	61,816
36	Madiun	82,738	83,269	83,609	84,281	84,323	84,604
37	Surabaya	1,367,841	1,376,599	1,386,442	1 393 749	1,399,284	1,406,683
38	Batu	95,698	96,309	97,820	98 913	99,896	100,902
	Jawa Timur	18,503,516	18,503,516	18,793,042	18,925,140	19,051,636	19,172,610

*Source: Central Statistics Agency of East Java Province Year 2010-2015*

Table 1 shows that the largest number of male residents is in the city of Surabaya. The second largest number is in Malang Regency and the third is in Jember Regency, while the least male population is in Mojokerto City. The largest number of female residents is in the city of Surabaya. The second largest number is in Malang Regency and the third is in Jember Regency, while the least female population is in Mojokerto City.

### 3.2 Population of East Java Province

Data from the Central Statistics Agency of East Java Province for 2010-2015 showed an annual increase in the population of districts and cities in East Java Province from 2010 to 2015. In 2010, the total population of East Java was 37,476,757 people. This number increased to 37,687,622 people in 2011, 37,879,713 people in 2012, 38,363,195 people in 2013, 38,610,202 people in 2014 and 38,847 .561 people in 2015.

### 3.3 East Java Population by Educational Attainment

#### a. Primary Education

Data from the East Java Provincial Statistics Agency (BPS) in 2010-2015 showed that the highest percentage of the population whose highest level of education was primary school was in Trenggalek Regency. Despite fluctuating, Trenggalek Regency remains the region with the highest percentage of primary education as the highest attained education level. In 2010, it was 43.39% then decreased in 2011 to 41.74%. It fell progressively in 2012 to 38.60%. However, it showed an increase back to 41.00%. In 2014, it fell to 38.74% and showed a steady decrease in 2015 by reaching 38.70%.

#### b. Junior High School (Lower Secondary Education)

Data from the East Java Provincial Statistics Agency (BPS) in 2010-2015 showed that the highest percentage of the population whose highest level of education was lower secondary school (junior high school) was in Mojokerto Regency. It was 25.94% in 2010 then decreased slightly to 25.91% in 2011. It fell again in 2012 to 24.47%. It showed a progressive change in 2013 to 22.49%. However, it rose again in 2014 to 22.69% and to 24.15% in 2015.

### c. Senior High School (Upper Secondary Education)

Data from the East Java Provincial Statistics Agency (BPS) in 2010-2015 showed that the highest percentage of the population whose highest level of education was upper secondary school (senior high school) was in the city of Surabaya. It was 37.55% in 2010 then decreased to 35.69% in 2011. It fell quite sharp to 25.11%. It showed a slight increase in 2013 to 26.56% which then fell again to 25.33% in 2014. It then increased again to 26.27% in 2015.

The lowest percentage of the population whose highest level of education was senior high school was in Sampang Regency. In 2010, it was 4.82%. It increased in 2011 to 5.38%, but fell again in 2012 to 4.34%. The following year (2013) it increased to 5.10% and increased again in 2014 to 5.45%. In 2015, it reached the highest at 5.85%. However, Sampang Regency still had the lowest percentage of other regions in East Java Province during 2010-2015 periods.

### d. Tertiary Education

Data from the East Java Provincial Statistics Agency (BPS) in 2010-2015 showed that the highest percentage of the population whose highest level of education was tertiary level was in the city of Madiun. It was 17.36% in 2010 then dropped to 13.38% in 2011. It decreased again to 12.45%. In 2013, it gradually rose to 16.59% and to 17.70% in 2014. It then reached the highest level to 17.74% in 2015, slightly above of 2010.

**Table 2.** East Java Population by Educational Attainment Year 2010-2015 (percentage)

No	Educational Level	2010	2011	2012	2013	2014	2015
1	Primary Education	30.95	29.51	30.11	29.87	29.15	29.97
2	Lower Secondary Education	19.62	20.11	18.22	17.69	17.89	18.75
3	Upper Secondary Education	19.20	19.55	13.07	13.71	13.86	13.96
4	Tertiary Education	5.36	5.55	5.24	4.99	5.41	5.88

Source: Central Statistics Agency of East Java Province Year 2010-2015

Table 2 shows that the number of populations that attained primary, lower secondary and tertiary education fluctuated over the five years period (2010-2015). On the other hand, the number for upper secondary level continuously decreased over the period.

### e. Minimum Wage

Data from the East Java Provincial Statistics Agency (BPPS) in 2010-2015 showed that the largest minimum wage in East Java was in the city of Surabaya. The Minimum Wage in the city annually increased over the period. In 2010 it was Rp1,031,500 and increased in 2011 to Rp1,115,000. It gradually climbed in over the next four years to Rp1,257,000, Rp1,740,000, Rp2,200,000 and Rp2,710,000 respectively.

### f. Business Field

According to data from the East Java Provincial Statistics Agency (BPPS) in 2010-2015, in 2015, the processing industry contributed the largest to East Java's Gross Regional Domestic Product, amounting to 29.27%. It was then followed by Transportation and Warehousing at 17.64%, Agriculture, Forestry, and Fisheries at 13.75%, and Wholesale and Retail Trade, Car and Motorcycle Repair at 9.50%. Meanwhile,

construction became the business field that gave the lowest contribution, which was 0.09%. In the meantime, the Mining and Excavation Business Field in 2015 experienced a significant decrease to 3.79% compared to 2014 which reached 5.17%.

### 3.4 Working Status

**Table 3.** East Java Population by Working Status (percentage)

No	Working Status	2010	2011	2012	2013	2014	2015
1	Formal	29.07	32.23	33.80	33.78	34.92	36.81
2	Non-Formal	70.93	67.77	66.20	66.22	65.08	63.19

Source: Central Statistics Agency of East Java Province Year 2010-2015

Table 3 shows that the percentage of total population of informal workers is much greater than the total population of formal workers. However, during 2010-2015, the percentage of the population as informal workers had gradually decreased. From 70.93% in 2010, despite of 0.02% increase in 2013, it significantly decreased to 63.19% in 2015.

#### a. Human Development Index (HDI)

The largest Human Development Index in East Java Province was in Surabaya City. The HDI of Surabaya City consistently increased from 2010-2015. In 2010, it was 77.20 and increased 0.42 to 77.62 in 2011. It then gradually climbed to 78.05 in 2012, 78.51 in 2013, 78.87 in 2014 and reached 79.43 in 2015. The smallest HDI in East Java Province was in Sampang Regency. Despite of being the smallest, it increased over the five years period from 2010-2015. Started from 54.49 in 2010, it slowly climbed to 55.17 in 2011, 55.78 in 2012, 56.45 in 2013, 56.98 in 2014 and reached 57.27 in 2015.

#### b. Life Expectancy (LE) Rate

The highest life expectancy rate in East Java was in Blitar City. In 2010, it was 72.23 and increased to 72.51 in 2011. There was a 0.29% increase from 2011 to 2012 (72.80), but it was followed by 0.81% decrease from 2012 to 2013. The LE rate then increased again in 2014 to 72.70 and to 72.94 in 2015. The lowest Life Expectancy Rate was in Probolinggo Regency. In 2010, Probolinggo's LE rate was 61.13. It increased in 2011 and 2012 to 61.41 and 61.70 respectively. However, it decreased in 2013 to 61.87. It then increased again in 2014 to 65.75 and to 65.85 in 2015.

#### c. Poverty Rate

The number of poor people in East Java Province from 2010-2015 has decreased. In 2010, the number of poor people in East Java Province was 5,529,300 people (15.26%). In 2011, it decreased to 5,356,210 people (14.23%) and continued to fall in the following three years to 4,960,500 (13.08%), 4,855,820 (12.73%), 4,748,420 (12.28%) people respectively. But unfortunately, the number increased again in 2015 to 4,775,970 people. However, the percentage remained the same as the previous year (12.28%). The largest number of poor people is in Jember Regency. In 2010, the number of poor people in Jember Regency was 311,800 people. This number decreased to 292,100 in 2011 and to 280,000 in 2012. This number continued to decline in the following three years, 278,500 in 2013, 270,400 in 2014 and 268,100 in 2015.

#### d. Unemployment Number

Data from the East Java Provincial Statistics Agency (BPPS) in 2010-2015 showed that the greatest number of unemployed was in the city of Surabaya. In 2010, the number of unemployed people in Surabaya was 91,390 people. In 2011, it increased dramatically to 104,254 people and continued to fall in 2012 to 75,800 people. It then slightly decreased in 2013 to 78,898 people. The number then increased in 2014 and 2015 to 85,345 people and 102,914 people respectively.

#### e. Economic Growth

**Table 4.** Economic Growth of East Java Province Year 2010-2015

Year	Economic Growth
2010	6.68
2011	6.44
2012	6.64
2013	6.08
2014	5.86
2015	5.44

*Source: Central Statistics Agency of East Java Province Year 2010-2015*

Economic growth of East Java Province shows in table 4 above, fluctuated over the period of 2010-2015. In 2010, East Java's economic growth was 6.68% and decreased in 2011 to 6.44%. However, it increased 0.2% to 6.64% in 2012 which unfortunately followed by gradually decrease over the next three years. In 2013, the economic growth of East Java Province dropped to 6.08%. This was followed by another quite significant fall to 5.86% in 2014 and 5.44% in 2015.

#### f. Human Development Index and Poverty in East Java

**Table 5.** Human Development Index and Poverty in East Java

Year	Life Expectancy Rate (X1)	Consumption (X2)	Average length of schooling (X3)	Literacy Rate (X4)	Poverty (X5)	Economic Growth (Y)
2010	69.60	408,021	7.24	88.34	15.26	6.68
2011	69.81	479,491	7.36	88.79	14.23	6.44
2012	69.81	524,225	7.45	90.35	13.08	6.64
2013	70.19	586,409	7.55	90.49	12.73	6.08
2014	70.45	674,581	7.61	91.36	12.28	5.86
2015	70.68	830,472	7.71	91.47	12.28	5.44

*Source: Central Statistics Agency of East Java Province Year 2010-2015*

Per capita consumption of the people of East Java increased over the period of 2010-2015 in table 5. Showed the increasing number of lives needs of the people of East Java that must be fulfilled. In 2010, the per capita consumption was Rp408,021. In 2011, it increased to Rp479,491. It then continued to rise over the next four years, Rp524,225 in 2012, Rp586,409 in 2013, Rp674,581 in 2014 and Rp830,472 in 2015.

**g. Multiple Linear Regression Functions**

**1. Correlation**

**Table 6.** R-square Test Result

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.927 <sup>a</sup>	.870	.820	.00148	1.000	34.240	4	1	.002

a. Predictors: (Constant), poverty, life expectancy rate, average years of school, per capita consumption, literacy rate

Table 6 shows the R square value of 0.87. This means that 87% of the predicted economic growth can be explained by the five independent variables: life expectancy, per capita consumption, average length of schooling, literacy rate, and poverty while the remaining 13% is influenced by other causes outside the model.

**2. T-test**

**Table 7.** T-test Result

Model	B	Sig.
(Constant)	97.769	0.002
Life expectancy rate	-1.427	0.099
Per capita consumption	-0.288	0.111
Average length of schooling	-2.6	0.065
Literacy rate	0.138	0.013
Poverty	-0.088	0.053

The effect of life expectancy, per capita consumption, the average length of schooling, literacy rate, and poverty on economic growth is tested by the t-test which aims to test the significance of the effect of each independent variable on the dependent variable. The results can be seen in table 7.

From table 8, this study obtained a linear function as follows:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \mu$$

$$Y = 97,769 - 1,247X_1 - 0,288X_2 - 2,600X_3 + 1,38X_4 - 0,888X_5$$

With  $\alpha$ : 5% and  $df = 54$  ( $nk = 60 - 6$ ), the t-table value is 2.004. Based on the t-table value and the assumption of t-count is greater than t-table, it can be explained in detail as follows:

a. The effect of life expectancy on economic growth

Table 7 shows that this variable has a significance level of 0.099. When it is compared with the predetermined degree of error of 0.05, this variable is insignificant. The significance value of the life expectancy variable is greater than the degree of error, which means that  $H_0$  is accepted and  $H_1$  is rejected.

b. The effect of per capita consumption on economic growth

Table 7 shows that this variable has a significance level of 0.111. When it is compared with the predetermined degree of error of 0.05, this variable is insignificant. The significance value of the per capita consumption variable is greater than the degree of error, which means that  $H_0$  is accepted and  $H_2$  is rejected.

c. The effect of average length of schooling on economic growth

Table 7 shows that this variable has a significance level of 0.065. When it is compared with the predetermined degree of error of 0.05, this variable is insignificant. The significance value of the average length of schooling variable is greater than the degree of error, which means that  $H_0$  is accepted and  $H_3$  is rejected.

d. The effect of literacy rates on economic growth

Table 7 shows that this variable has a significance level of 0.013. When it is compared with the predetermined degree of error of 0.05, this variable is significant. The significance value of the literacy rate variable is smaller than the degree of error, which means that  $H_0$  is rejected and  $H_4$  is accepted.

e. The effect of poverty on economic growth

Table 7 shows that this variable has a significance level of 0.053. When it is compared with the predetermined degree of error of 0.05, this variable is insignificant. The significance value of the literacy rate variable is smaller than the degree of error, which means that  $H_0$  is accepted and  $H_5$  is rejected.

### **3.5 Solution to Problem**

#### **a. Life Expectancy**

The results show that life expectancy has no impact on economic growth. This means that a one-year increase in life expectancy does not affect the pace of the economy. On the contrary, it has a negative relationship to economic growth. From the t-test results, it can be concluded that the variable life expectancy does not affect economic growth in East Java. This might be due to the large and annually increasing number of elderly people in the province of East Java.

The increasing life expectancy means an increase in the number of elderly people. Based on data, life expectancy in East Java Province was 70.68 years in 2015, an increase of 0.23% from the previous year. This increase is the result of an increasing population of elderly people and an increase in the degree of public health. This increase of life expectancy is an achievement for the East Java Provincial government. The social program planned for the welfare of the population of East Java Province is considered successful, marked by an increase in life expectancy.

#### **b. Consumption**

The results show that per capita consumption has negative impact and not significant on economic growth. The result does not match with the initial assumption. The result shows that every 1% increase in the consumption rate will mean -0.29% economic growth in East Java. This is because the consumptive culture in Indonesia has long been applied by society long before the reform era. During the New Order era, a consumptive society was formed. People bought finished goods instead of creating or making something to be finished goods.

The government's economic policy by making the middle class society as the spearhead of the economy from the lunge of the global crisis can also be a time bomb for the national and regional economies, starting with a small explosion in the middle of the lower class. The policy is not the best choice. Changing people's habits from consumers to producers is the best choice because consumptive societies are a characteristic of people in developing countries. This is different from the customs of society in developed countries. People in developed countries are people who prefer to produce things that have a high selling value. They feel prestigious by producing products rather than consuming them. This is characteristic of the mindset of people in developed countries.

### **c. The Average Length of Schooling**

The findings that show little effect of average school length on economic growth. It indicates that increasing the average length of schooling has less impact on productivity levels. This is because the highest average length of schooling in East Java from 2010 to 2015 is only 7.62 years, which means that education only takes up to grade 2 of junior high school. This variable has no effect on the level of labor productivity. On the other hand, it can be seen that there is a mismatch between the qualifications of human resources and the economic structure in East Java.

The low average length of schooling in East Java is influenced by several factors. The main factor is economic. The high poverty rate is one of the important factors causing dropouts in East Java Province. The process of equitable education is also constrained by the factor of residence. Education and health services have not fully reached all levels of society. The second main factor is the existence of a school unit. Most schools are located in the sub-district area.

### **d. Literacy Rate**

The finding shows that the literacy rate has a positive and significant effect on economic growth in East Java Province. Every 1% increase in literacy rate will have an effect of 0.63% on economic growth. The high literacy rate illustrates a fairly good level of public education and increased community productivity which has implications for increased economic growth in East Java.

The literacy rate is a factor in the development index. The human development index itself becomes a general description of the level of education, understanding of the global work ethic, work productivity, life expectancy and other factors. The level of education, work ethic, and population productivity attract entrepreneurs to invest in addition to, of course, regional comparative advantages related to the geographical orientation of product marketing and the availability of supporting infrastructure.

### **e. Poverty**

The results show that poverty has negative impact and significant on economic growth. This means that every 1% increase in the poverty will hinder economic growth by -0.088%. Poverty has become the basic problem for East Java provincial government to stimulate economic growth. Even though the poverty rate was stable at 12.28% in 2015, it effected on economic growth by decreasing it to 5.44%.

Economic growth becomes less qualified if 90% of the benefits (in the form of national income) are only enjoyed by 20% of the population. The remaining 10% of economic growth benefits are enjoyed by 80% of the population. Economic growth should involve the participation of the entire population so that the benefits of economic growth

can be enjoyed by the entire population and can be distributed more evenly. However, in many developing countries, economic growth has benefited the poor less and benefited the non-poor more.

## V. Conclusion

In accordance with the formulation of the problem, the research objectives and the results of the analysis, the following conclusions can be obtained:

1. Life expectancy has a negative and insignificant effect on economic growth in East Java for the period of 2010-2015. This is not in accordance with the hypothesis proposed.
2. The average length of schooling has a negative and insignificant effect on economic growth in East Java Province for the period of 2010-2015. This is not in accordance with the hypothesis proposed.
3. Literacy rate has a positive but significant impact on Economic Growth in East Java province for the period of 2010-2015. This is in accordance with the hypothesis proposed.
4. Poverty has a negative and insignificant effect on economic growth in East Java Province for the period 2010-2015. This is not in accordance with the hypothesis proposed.

Based on the above conclusions, below are the recommendations that can be given from this research:

- a) Life expectancy is used as a measure of the state and health service system of a community. This is seen as the final form of efforts to improve the level of public health. Even though the life expectancy rate in East Java is already quite high, East Java people should still receive better attention from the government by maintaining and increasing the degree of good health by improving health facilities and infrastructure for them.
- b) The consumptive culture is very worrying. This is not because it is related to ethical issues and the fragile character of the nation's children, but this is because of dependence on imported goods which will undoubtedly kill the local product market. The danger is the resilience of the economy. The government must show its love for domestic products. If the government sets a good example, the people will follow it. Consumptive culture is also an open invitation for global capitalism to freely control our mindset, lifestyle, tastes, and even the ideology of our middle class according to the values attached to the goods they produce. Seeing this huge threat, it seems that the right moves must be sought to reduce the spread of this consumptive culture.
- c) Because the average length of schooling in East Java is still low, which is only 7.62 years, the government needs to give serious attention to the education system in East Java. Either in an effort to improve the educational curriculum or through the provision of various educational facilities. In addition, the 9-year compulsory education program launched by the government should be increased to become 12 years compulsory education.
- d) The high literacy rate which continues to increase every year illustrates the success of the government in eradicating the illiterate population in East Java. Efforts to develop higher quality human resources as a continuation of illiteracy can be in the form of increasing skills and knowledge with the aim of expanding job opportunities and creating job opportunities. Therefore, education should receive the attention it deserves from the government as an education facilitator. For this reason, the government needs

to make efforts to improve education through various programs, both in the form of upgrading educational facilities and infrastructure, compulsory education programs, scholarships or school operational assistance.

- e) Due to the high poverty rate in East Java, the government should pay attention to the imbalance between urban and rural residents. Poverty alleviation efforts should be carried out in stages so that poverty in East Java can be reduced.

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