

EFFECT OF HUMAN CAPITAL ON ECONOMIC GROWTH IN THE PROVINCE BENGKULU

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Abstract. The objectives of this study include the analysis of how the effect of Human Capital and other determinants on Economic Growth in Bengkulu Province. The analytical method. using panel data regression statistical analysis tools for analyze how the influence of Human Capital (Human Capital) and other determinants of economic growth in Bengkulu Province. The results showed that the average length of schooling (X1), the workforce had the skills (X2) and investment (X9) had a significant positive effect on economic growth. While the Life Expectancy Rate (X5), Government Expenditure in the Health (X7) significant negative impact on economic growth. (X2), the Workforce has no skills (X3) Government Expenditures in the Education (X4,) Maternal Mortality Rate (X6) and Unemployment (X8) have no significant effect on economic growth in Bengkulu. Development that prioritizes improving the quality of human resources can be used as one of the regional development strategies in Indonesia, because the impact can not only create economic growth but also increase income distribution, so that the development objectives of growth and equity can be achieved simultaneously. There are still districts that have an education budget of less than 20% and health less than 10% need to be noted and improved so that later it is hoped that it can produce quality human resources so that districts / cities and Bengkulu Province can become more advanced and catch up with the Province.

Keywords : Human Capital Investment, Economic Growth, Length of Schooling, Workforce, Investment.

Introduction

Geographically, Bengkulu province has a very strategic position, bounded by 4 major provinces, namely West Sumatra, South Sumatra, Lampung, and Jambi. In economics, this should be beneficial for business development. However, its advantageous location is not supported by better economic performance. Bengkulu Province is among the lowest in terms of achieving economic growth. The recorded GRDP (Gross Regional Domestic Product) of Bengkulu Province in 2016 was 40,083 billion Rupiah, which dropped behind Bangka Belitung Province of 47,853 billion Rupiah. From the contribution to GRDP, Bengkulu province still relies on the agricultural sector to drive the economy in its region. Yet, this large contribution is not followed by the growth rate due to a shift in the composition of the sector contributing to GRDP. The tendency of changes in Bengkulu's economic structure is from the primary sector to a more modern sector. This allows for the transfer of labor from the traditional sector to sectors that require technological change. Therefore, the development of human resources is an important factor in implementing technological changes and following the flow of economic structural changes in Bengkulu.

However, this shift in economic structure is not accompanied by the quality of human resources absorbed in the labor market. The quality of human resources in Bengkulu province is still low because the working population is still dominated by residents with a basic education level or elementary school below with a percentage of more than 35 percent. While the percentage of the population with a university/higher education level working is still very low. It was only 15 percent in 2016. The low quality of human resources absorbed in the workforce can be one of the factors triggering the high poverty rate in Bengkulu province. The percentage of poor people in Bengkulu province from 2010 to 2017 averaged 17.65%. this number was the second-highest number on the island of Sumatra after Aceh province and was still far behind the national average poverty rate. Based on the background described above, the main problem in this paper is; how is the effect of human capital and other determinants on economic growth in Bengkulu Province? Based on the formulation of the problem that the author has described, this research aims to analyze how the influence of human capital (human capital) and other determinants of economic growth in Bengkulu province.

Literature Review

The Concept of Human Capital

Todaro and Smith (2006) distinguish the concept of human capital and human resources. Human capital is skills, abilities, aspirations, and health. They are the result of expenditures in the field of education, provision, and development of job training programs, health care, and maintenance programs, and so on. Meanwhile, human resource is the quantity and quality of the workforce in a country. Human capital can be defined in many ways, but in general, human capital has the meaning of knowledge, skills, competencies, and other characteristics possessed by humans related to economic activities (OECD 1998). Therefore, human capital must be treated as a factor of production parallel to physical capital and separated from labor.

The Investment of Human Capital

According to Becker (1962), investment in human capital relates to all activities that affect an individual real income in the future through increasing human resources. There are many ways to invest in human capital including schools, on-the-job training, health care, taking vitamins, and obtaining information about the economic system. The effects of these investment modes differ in terms of income and consumption, the number of resources invested, and the rate of

return on investment. However, all these investment methods enhance human abilities both physically and mentally. Thereby, it increases the prospect of real income. Becker's human capital investment can be grouped into two categories; education and health. The Organization for Economic Co-operation and Development (2011) in its report states that investing in human capital in education will also indirectly affect the level of health. This view is based on evidence and studies showing that well-educated people tend to be healthier. They are able to understand and searching more information about health than less educated people.

The Theory of Endogenous Growth

The new growth theory model or well-known as the endogenous growth model has two types of theories; (1) the human capital model, and (2) the research and development models. The Human Capital Model focuses on the accumulation of capital in its various forms such as physical capital, human capital, health capital, and so on. They will result in economic growth. This Human Capital Model was introduced by Romer (1983, 1986, 1996), Lucas (1988), and Robelo (1991). The Research and Development Model was pioneered by Romer (1990), Grossman and Helpman (1991), and Aghion and Howitt (1992) put more emphasis on technological progress that results in innovation to increase productivity and generate economic growth. The theory of endogenous growth initially developed in two branches of thought that rested on the importance of human resources as the main key in the economy, as follow:

1. The idea believes that knowledge stock is the main source of increasing economic productivity.
2. The idea emphasizes the importance of learning by doing and human capital with the introduction of new (external) matters in the economy which are the driving factors for increasing economic productivity.

The model developed by Lucas uses two types of capital; physical capital and human capital. The formula used by Lucas is as follows:

$$Y_t = A k_t^\alpha (u_t H_t L_t)^{1 - \alpha} H_t^\theta$$

Keterangan

Y_t : Production Output

A : Constanta

K : Capital Stock

L : Labor

U : Time used for labor to produce

H : The quality of human capital which is the average amount of knowledge possessed by workers

Increasing H_t is in line with u_t , the production function will be Increasing Return To Scale where H_t is external, that depends on the average skill level of the workforce in the company.

Research Method

Research Design

This was quantitative research. in terms of the level of explanation, this research was associative research with a causal relationship. Based on Sugiyono (2012: 59), a causal relationship is a cause and effect. Thus, in this research, there were independent (influence) and dependent variables (influenced).

Data Collection Method

The data used were secondary data obtained through documentation in the form of official publications from various relevant agencies. There were the Central Statistics Agency (BPS) of Bengkulu Province, National BPS of relevant agencies, local governments, Bappeda (Regional Development Planning, Research and Development Agency) of Bengkulu Province, Bank Indonesia, and various literature or publications related to this research.

Data Analysis Method

The developed model is derived from theories, concepts, and empirical research based on the results of Baro and Sala-i-Martin (1990) and Moretti (1999) research, concerning the production function of Cobb-Douglas:

$$Y = A \cdot L^\beta K^\delta HC^\gamma G^\theta \dots\dots\dots (1)$$

di mana:

Y = GDP

A = Technology Rate

L = Labor

K = Private Capital

HC = Human Capital

G = Government spending on Health and Education

$\beta, \delta, \gamma, \theta$ = parameters to be tested

Besides human capital (HC) can be derived from the level of education, it can also be derived from a skilled workforce (L). The expertise of the workforce, in this case, is obtained from worker education and training. Moretti (1999) divided the workforce into two groups,: (1) skilled workers, who are graduates of baccalaureate/diploma III graduates and undergraduate graduates, while (2) unskilled workers are those who do not study at school, do not finish elementary school, until they finish high school (SMTA), diploma I and diploma II. Based on this labor grouping, equation (1) changes to:

$$Y_{jct} = A \frac{\gamma}{jct} H^{\frac{\alpha H}{jct}} L^{\frac{\alpha L}{jct}} K^{\frac{\alpha K}{jct}} \dots\dots\dots (2)$$

Y is the output. A is the proportion of the minimum number of workers who have a bachelor's degree. H is the workforce with a high level of human capital (skills). L is the workforce with a low level of human capital (unskilled). K is the input other than labor. jct indicates industry, city, and year. $\gamma, \alpha H, \alpha L, \beta$ are parameters to be tested.

Human capital is not only viewed from the educational variable but also reviewed using health variables as conducted by Krigia (2006) who is a WHO researcher using the model

$$GDP = f(D, L, K, HK, EA, OE, MMR, AHH) \dots\dots\dots (3)$$

D = land; L = Labor input (people aged 15 years and over); K = capital stock HK = human capital. They are skills and knowledge manifested in a person; EA = entrepreneurial ability (ability to organize and plan production and develop new products); OE = a vector of other factors that affect the production of MMR = number of women who die during pregnancy and childbirth per 100,000 live births AHH : Life Expectancy.

In conducting this analysis, the author took variables from the research of Baro and Sala-i-Martin (1990) and Moretti (1999) for the concept of human capital and government spending, as well as the Krigia (2006) model for the health variable. Researchers also included Unemployment Variables obtained from previous research in the modeling. Thus, the equation in the production function was obtained as follows:

$$PDRB=f(RLS, Skill, Unskill, Gedukasi, AHH, AKI, Gheal, Unemployment, Investment.(4)$$

From the function of equation (4), it was converted into a multiple linear regression equation in the form of a natural logarithm equation by entering the error term (ϵ). Furthermore, the complete final model can be formulated as follows:

$$\ln PDRB_{it} = \beta_0 + \beta_1 RLS + \beta_2 Skill + \beta_3 Unskill + \beta_4 Gedukasi + \beta_5 AHH + \beta_6 AKI + \beta_7 Gheal + \beta_8 Unemployment + \beta_9 Investment + \epsilon_{it} \dots\dots\dots(5)$$

- PDRB : Regency/City GRDP Growth in Bengkulu Province
- RLS : Average Years of Studying at school in Regency/City in Bengkulu Province
- Skilled : Labors who have expertise (Skills) , the number of people aged 15 and over (working-age population) who work from a baccalaureate/Diploma III graduate and graduate, in the Regency/City of Bengkulu Province measured in Thousands of Souls
- Unskilled : Unskilled workers/labors, the number of people aged 15 and over (working-age population) who work from those who do not study at school, do not graduate from elementary school, graduated from elementary school, graduated from junior high school, graduated from high school in Bengkulu Province Regency/City measured in Thousands of People
- Gedukasi : Government Expenditures in the District/City Education Sector in Bengkulu Province
- AHH : Life expectancy of the population of districts/cities in Bengkulu Province
- AKI : Maternal Mortality Rate in Regencies/Cities in Bengkulu Province
- Gheal : Government Expenditures in District/City Health Sector in Bengkulu Province
- Unemployment : Number of Population who do not work in Regency/City in Bengkulu Province
- Investment : Investment Growth in Regencies/Cities in Bengkulu Province

On the next page, adjustments would be made to writing variables where RLS became (Ln x_1), Workers with Skills (Ln x_2), Workers without skills (Ln x_3), Government Expenditures in Education (Ln x_4), Life Expectancy Rate (Ln x_5), Maternal Mortality Rate (Ln x_6), Government Expenditure on Health Education (Ln x_7), Unemployment (Ln x_8), Investment (Ln x_9). And Economic Growth (LnY)

To estimate this Fixed Effect model, the intercept differed between districts/cities. The dummy variable technique method was used to explain the difference between these intercepts. This estimation model is often called the Least Squares Dummy Variable (LSDV) technique. A fixed Effect model with a dummy technique can be written with the following equation.

$$\ln PDRB_{it} = \beta_0 + \beta_1 RLS + \beta_2 Skill + \beta_3 Unskill + \beta_4 Gedukasi + \beta_5 AHH + \beta_6 AKI + \beta_7 Gheal + \beta_8 \text{Pengangguran} + \beta_9 \text{Investasi} + \beta_{10} d_BS + \beta_{11} d_Rl + \beta_{12} d_BU + \beta_{13} d_Kaur + \beta_{14} d_Sluma + \beta_{15} d_Muko + \beta_{16} d_Lbng + \beta_{17} d_Kph + e_{it} \dots\dots\dots(6)$$

- β_0 : The Beta Coefficient of Bengkulu City, Bengkulu City was used as a basis or reference category in this modeling because Bengkulu City was considered to have more complete facilities, infrastructure, and other supporting factors than other districts.
- GRDP : Regency/City GRDP Growth in Bengkulu Province
- RLS : Average Years of studying at school in Regency/City in Bengkulu Province
- Skilled : workers who had expertise (Skills) the number of people aged 15 and over (working-age population) who worked from a baccalaureate/Diploma III graduate and graduate, in the Regency/City of Bengkulu Province measured in Thousands of Souls
- Unskilled : Unskilled workers, the number of people aged 15 and over (working-age population) who worked from those who did not go to school, did not graduate from elementary school, graduated from elementary school, graduated from junior high school, graduated from high school in Bengkulu Province Regency/City measured in Thousands of People
- Gedukasi : Government Expenditures in the District/City Education Sector in Bengkulu Province
- AHH : Life expectancy of the population of districts/cities in Bengkulu Province
- AKI : Maternal Mortality Rate in Regencies/Cities in Bengkulu Province
- Gheal : Government Expenditures in District/City Health Sector in Bengkulu Province
- Pengangguran : Number of Population who did not work in Regency/City in Bengkulu Province

- d_Bs : Dummy South Bengkulu Regency
- d_Rl : Dummy of Rejang Lebong Regency
- d_Bum : Dummy of North Bengkulu Regency
- d_Kaur : Dummy Dummy Kaur Kabupaten
- d_Sluma : Dummy of Seluma Regency
- d_Muko : Dummy of Muko-Muko Regency
- d_lbng : Dummy of Lebong Regency
- d_Kph : Dummy of Kepahiang Regency

Bengkulu City in this model was used as a basis or reference category. Thus, it did not become a dummy variable. The reason for choosing Bengkulu City as the basis or reference was because of the 9 variables owned and used as indicators of Human Resource Development in this research, Bengkulu City had the highest number in 4 accurate variables, namely Average Length of School (LnX1), Government Expenditures in the Education Sector (LnX4), Life Expectancy (lnX5) and Government Expenditures in the Health Sector (LnX7) And considering the condition of Bengkulu City which had other facilities and infrastructure. It was considered more complete than other Regencies.

Variable Operation

1. Human capital is measured through education variables (average number of years of studying at school, skilled worker, unskilled worker, government spending on education), health variables (life expectancy rate, maternal mortality rate, government spending on health), and other variables such as unemployment and investment.
2. The average length of schooling (RLS) is the time spent by residents aged 15 years and over undergoing formal education. The average length of schooling is expressed in years.
3. Workers who have the expertise (Skills) are those aged 15 and over (working-age population) who work from a baccalaureate/Diploma III graduate and graduate, in the Regency/City of Bengkulu Province measured in Thousands of Souls
4. Unskilled workers, the number of people aged 15 and over (working-age population) who work from those who do not go to school, do not graduate from elementary school, graduated from elementary school, graduated from junior high school, graduated from high school in Bengkulu Province Regency/City measured in Thousands of People
5. Government Expenditures on education Total Expenditures issued by Regional Governments from the APBD/ state revenue budget for education expenditure posts, measured in Million Rupiah.
6. Life expectancy (AHH) is a number showing the average age of a person to live from birth to death in the Regency/City in Bengkulu Province in years.
7. Maternal mortality rate (MMR) Deaths that occur in mothers due to pregnancy, childbirth, and the puerperium in the Regency/City in Bengkulu Province are measured in units of Soul.
8. Government Expenditures on Health Total Expenditures issued by Regional Governments from the APBD for Health expenditure items, measured in Million Rupiah
9. Unemployment is a population of 15 years and over in the workforce who have worked and have never worked in a Regency/City in Bengkulu Province which is measured in units of thousands of people.
10. Investment Total funds entering the Regency/City in Bengkulu Province consist of investments made by the domestic private sector (PMDN) and foreign private sector (PMA) which are measured in billions of Rupiah
11. Economic Growth Changes in the percentage increase/decrease in Gross Regional Domestic Product (GRDP) in each region in 2006-2017 based on constant prices in 2010 in this case expressed in percent.

Discussion

Independent Variable Test (F-Test)

The F test is used to compare the Common Effect with the Fixed Effect Model as the most suitable model for panel data analysis. The decision rules in the F test are as follows:

H_0 : *Common Effect Atau Pool Effect Model*

H_1 : *Fixed Effect Model*

Based on the results of the analysis in Table 4.9, it can be seen that the F test value was 2.787204 with a Prob of 0.0084 and a Chi-Square value of 23.905055 with a prob of 0.0024 or the F-test. Besides, chi-square prob values were smaller than Alpha 0.05. Thus, we can reject H_0 and accept H_1 . Hence, it can be stated that the Fixed Effect Model was a more suitable analytical technique

Coefficient of Determination (R^2)

The coefficient of determination or R^2 is a measure of goodness of fit. It explains whether the linear regression line is following the observation data. The coefficient of determination is a measure that explains the magnitude of the variation in regression due to changes in regressor variation. The sum of the squares of the total variation or the total sum of squares (TSS) consists of the sum of the squares of the explained sum of squares (ESS) and the sum of the squares of the unexplained variance or the residual sum of squares (RSS).

R^2 value of the research value was 0.575185. It means that the variation of Economic Growth (Y) can be explained simultaneously by the variables: Average length of schooling (X1), Skilled worker (X2), Unskilled worker (X3), Government Expenditures for Education (X4), Life Expectancy (X5), Maternal Mortality Rate (X6), Government Expenditure on Health (X7), Unemployment (X8) and Investment (X9) of 57.51 percent 42.49 percent explained by other factors outside of the models.

District/City Intercept and Individual Regression Coefficient

Variables	Coefficient	Prob
C	4.906268	0,0609
LnX1	0.846270	0,0154*
LnX2	0.098693	0,0336*
LnX3	-0.055570	0,2052
LnX4	0.019207	0,6446
LnX5	-1.343056	0,0290*
LnX6	-0.019552	0,3705
LnX7	-0.021244	0,0000*
LnX8	-0.333199	0,9922
LnX9	0.012401	0,0358*
d_Bs	5.039425	0,2690
d_RI	5.141808	0,0638
d_Bu	5.243272	0,0147*
d_Kaur	5.067907	0,2791
d_Seluma	5.178790	0,0781*
d_Muko	5.153140	0,0945
d_Lbng	5.108050	0,2361
d_Kph	5.227463	0,0399*
R-Squared		0,575185
Adjusted R-Squared		0,494942
F-Statistic		7,168048
Prob (F-Statistic)		0,00000
Durbin –Watson Stat		1,654073

Source : Eviews

* significant: 5%

$$\text{LnY} = 4.906268 + 0,846270\text{LnX1} + 0,098693\text{LnX2} - 0,055570\text{LnX3} + 0,019207 \text{LnX4} - 1,343056\text{LnX5} - 0,019552\text{LnX6} - 0,021244\text{LnX7} - 0,333199\text{LnX8} + 0,012401\text{LnX9}$$

The results of the tests and calculations in question were coefficients that indicated the direction of the relationship, standard errors that indicate the level of error in the estimated variation, t-statistics showed the value of statistical calculations for variables and probabilities that indicate the significance of each independent variable. The probability value showed that partially the Variable Average Length of Studying at School (X1), Skilled Workforce (X2) Life Expectancy (X5) Government Expenditures in the Health Sector (X7) Investment (X9) shows an influence on Economic Growth (Y). Meanwhile, Unskilled Workforce (X3), Government Expenditure on Education (X4), Unemployment Rate (X8), and Maternal Mortality Rate (X6) did not affect Economic Growth (Y).

1. Average Length of Studying at School

The results of the tests and calculations in question were coefficients that indicated the direction of the relationship, standard errors that indicated the level of error in the estimated variation. t-statistics showed the value of statistical calculations for variables and probabilities that indicate the significance of each independent variable. The probability value showed that partially the

Variable Average Length of studying at school (X1), Skilled Workforce (X2) Life Expectancy (X5) Government Expenditures in the Health Sector (X7) Investment (X9) showed an influence on Economic Growth (Y). Meanwhile, for Unskilled workers (X3), Government Expenditures for Education (X4), Learning levels from Table 4.13 we can see that the variable average length of studying at school showed a probability value of 0.0154 (smaller than 0.05). It can be concluded that RLS (X1) has a significant effect on Economic Growth (Y) with a positive direction of influence. The constant (C) showed a value of 0.846270. This showed that if the average length of schooling increases by 1% then Economic Growth in Bengkulu Province will increase by 0.846270%

According to Romer (1986) in the theory of endogenous economic growth, science is a form of capital. With knowledge, an individual will be able to innovate in the production process. Romer (1994) also mentioned that capital accumulation has an important role in economic growth. In this case, the notion of capital involves knowledge capital and human capital. This is in line with research conducted by Alfansi (2017) where social conditions in Bengkulu province and the components of the human development index in education, namely the average length of schooling continue to increase in the years of research conducted from 2014 to 2016 wherein 2014 it was 8.28 years to 8.37 in 2016.

2. Skilled Worker

From Table 4.13 we can see that the skilled worker variable showed a probability value of 0.0336 (smaller than 0.05). It can be concluded that the Skilled Worker (X2) had a significant effect on Economic Growth (Y) with a positive direction of influence. The constant (C) showed a value of 0.0098693. This showed that if the Number of Skilled Workers increased by 1%, the Economic Growth in Bengkulu Province would increase by 0.0098693%

These results were in line with research conducted by Avanda Fahri Atahrim (2013). The higher the number of workers will increase the output produced to increase economic growth. According to the Solow-Swan theory, economic growth depends on the availability of production factors such as population, labor, and capital accumulation as well as technological progress. In this theory, SolowSwan stated that the labor factor can increase economic growth. The workforce here was not only the quantity of labor but the quality of the workforce was also taken into account. Human capital is an important capital in increasing productivity. The higher a person's education level, the higher the productivity produced, so that it is able to spur economic growth in an area.

3. Unskilled Worker (X3)

In Table 4.13, we can see that the Unskilled Worker variable showed a probability value of 0.2052 (greater than 0.05). It can be concluded that the Unskilled Worker (X3) had no significant effect on Economic Growth (Y) with a negative direction of influence. The constant (C) showed a value of -0.055570. This indicated that if the Number of Unskilled Workers increased by 1%, the Economic Growth in Bengkulu Province would decrease by -0.055570%. Low level of expertise (unskilled) or better known as an unskilled worker, in general, is a workforce with a low level of productivity and income but provides a fairly large absorption of labor. According to Ehrenberg and Smith (1994), the higher the expertise of a person seen from the length of education, the higher the income that will be obtained. The agricultural sector in Bengkulu Province still lacked innovation and creativity in processing, thus, crop yielded, the products produced tended to be unsatisfactory, and the variety of products produced had a low selling value and it was prone to crop failure due to lack of creativity and innovation. The agricultural sector was actually not an inhibiting factor for advancing an area, many areas combine the agricultural sector with tourism such as Batu Malang Regency, East Java. Some of Batu City's agricultural products such as potatoes, apples, and roses are suitable

for export. This was due to the innovation of derivative products in the agricultural sector. In this context, the agricultural sector was not a problem in Bengkulu Province, but the unskilled workforce was absorbed in Bengkulu Province.

4. Government Expenditure on Education (X4)

In Table 4.13, we can see that the variable government spending on education showed a probability value of 0.6446 (greater than 0.05). It can be concluded that Government Expenditure on Education (X4) did not have a significant effect on Economic Growth (Y) with the direction of influence being positive. The constant (C) showed a value of 0.019207. This showed that if the Total Government Expenditure on Education increased by 1%, the Economic Growth in Bengkulu Province would increase by 0.019207%. According to Todaro and Smith, 2012 Government spending in the education sector is an indirect investment provided by the government to increase human capital. Even some earlier economists emphasized the importance of human capital in production. Technological knowledge and skills are immaterial tools without them. Human physical capital is not used productively. The greater government spending in the education sector, it will increase human capital that will increase productivity. Thus, the GRDP of Bengkulu Province will increase. However, the results of statistical tests in Bengkulu Province showed the opposite direction to the existing theory. This might be due to the presence of a lag in human investment. The investment allocated for the benefit of human capital did not necessarily see the results in a short period. Hence, it is not surprising that in the government budget is often 'a tug' between investment in economic infrastructure (physical) and investment in the human capital development sector. The bargaining position (Bargaining Position) of the education sector among all sectors in the development sector that are fighting over the budget was low.

5. Life expectancy (X5)

Life Expectancy in Table 4.13 shows that the variable government spending on education indicated a probability value of 0.0290 (smaller than 0.05). It can be concluded that Life Expectancy (X5) had a significant effect on Economic Growth (Y) with a negative direction. The constant (C) shows a value of -1.343056. This shows that if the life expectancy increases by 1%, the economic growth in Bengkulu province will decrease by -1.343056 %. Health is a basic need for every human being because without public health it cannot produce products for the country or region. A country's economic activities will run when there is health insurance for its residents. Associated with the theory of human capital, human capital plays a significant role. It is more important than technological factors in spurring economic growth. Population health greatly determines the ability of the population to absorb and manage sources of economic growth, both related to technology and institutions that are important for economic growth. According to Ranis and Stewart (2000), the increase in life expectancy illustrates improved nutrition and public awareness of health and the environment. It will affect the improvement of population productivity. It will have a positive impact on the rate of economic growth. The higher the life expectancy of an individual means the longer the life span, will increase the productivity of the community. Increased productivity will automatically trigger economic growth. If the health index increases, then economic growth will also increase.

6. Maternal Mortality Rate (X6)

In Table 4.13, we can see that the variable government spending on education shows a probability value of 0.3705 (greater than 0.05). It can be concluded that the Maternal Mortality Rate (X6) had no significant effect on Economic Growth (Y) with the direction of the effect negative. The constant (C) showed a value of -0.019552. This showed that if the Maternal

Mortality Rate increased by 1%, the Economic Growth in Bengkulu Province would decrease by -0.019552%. The mortality rate for women, especially mothers and children, is actually more serious than the general mortality statistics. A study conducted by the WHO Partnership for Maternal, Newborn & Child Health (PMNCH) revealed that maternal and child health is not only a matter of the right to life but also the return on social and economic investment in the country. In general, the relationship between maternal health and Gross Domestic Product (GDP) existed in both directions, with the influence of maternal and child health on GDP being greater than the other way around. This was evidenced in a study of 180 countries, including Indonesia, using the Data Envelopment Analysis (DEA) method and Granger causal analysis which found evidence that the effect of GDP on maternal and child health had greater effects in lower-middle and lower-income countries than in upper-middle and middle-income countries.

7. Government Expenditure on Health (X7)

In Table 4.13, we can see that the variable government spending on education showed a probability value of 0.0000 (smaller than 0.05). It can be concluded that the Government Expenditure on Health (X7) had a significant effect on economic growth (Y) with the direction of a negative effect. The constant (C) showed a value of -0.021244. This showed that if the Government Expenditure on Health increased by 1%, the Economic Growth in Bengkulu Province would decrease by -0.021244%. This result reinforced the findings of Rajkumar and Swarop (2007). An increase of 1 percent of public health expenditure per GDP reduced the mortality rate under 5 years by 0.32 percent. This is because government spending has been effective in spending several allocations of health assistance directly or indirectly. The results of this research were also corroborated by Jha, Biswal & Biswal (2016) in India who found that the role of government spending on health spending almost certainly affected better human capacity through poverty reduction channels. The implication of this finding emphasized the importance of health budget allocation in every budget increase in the aspect of health facilities and infrastructure in rural areas. Razmi (2012) also suggested that improving health can increase productivity and the supply of labor. Labor productivity and supply can increase productivity and economic growth.

8. Unemployment (X8)

In Table 4.13, we can see that the Level variable showed a probability value of 0.9922 (greater than 0.05). Thus, the Unemployment Rate (X8) had no significant effect on Economic Growth (Y) with a negative influence direction. The constant (C) showed a value of -0.000199. This showed that if the Unemployment Rate increased by 1%. The Economic Growth in Bengkulu Province would decrease by -0.000199%. Unemployment had a positive but not significant effect on the economic growth of the Province and Regency/City in Bengkulu. If the economic growth of Bengkulu Province continued to increase, the demand for final goods and services in all economic units would also increase. An increase in goods and services in an area would indirectly open up new job opportunities in Bengkulu Province. This indicated that the level of unemployment depended on the high level of economic growth of a region, especially Bengkulu Province. The results of this study are following Okun's Law (Mankiw, 2003). It stated that there is a negative relationship between unemployment and real GDP. When there is a decrease in unemployment by 1 percent, it will increase economic growth by almost 2 percent. Based on Smuelson (2005), Okun's law is a link between the movement that measures the impact of the GDP cycle on unemployment. This rule states that if actual GDP falls 2 percent compared to potential GDP, the unemployment rate will increase by 1 percent. Empirical results show that Okun's Law applies to the Indonesian economy. This is because

the rate of economic growth is closely related to the unemployment rate. If economic growth is high, it will be able to increase aggregate demand which in turn will increase inflation. With inflation, it will be able to absorb labor/workers and reduce the high unemployment rate.

9. Investment (X9)

In Table 4.1,3 we can see that the investment variable showed a probability value of 0.0358 (smaller than 0.05)/ It can be concluded that investment (X9) had a significant effect on economic growth (Y) with a positive direction of influence. The constant (C) showed a value of 0.012401. This showed that if the Investment Level increases by 1%, the Economic Growth in Bengkulu Province would increase by 0.012401%. This was in line with the principles of the theory of economic growth from Evsey Domar (1939) and Sir Roy Harrod (1947). They stated that capital growth (investment) is in line with economic growth (output). Capital growth is positively correlated with economic growth. Harrod-Domar put forward this relation by how much additional capital is needed. Thus, the economy can grow as expected. To make it clear, if formulated as Δy , the formula is often given the name ICOR (Incremental Capital Output Ratio). Besides, it is also in line with the thinking of the Neo-Classic economic growth theory, especially the Solow economic growth model (1956), the investment growth will increase the capital stock which in turn will have a positive correlation with economic growth. With the increase in capital stock, the total stock of capital equipment will increase. In addition, technology will also increase which ultimately has implications for the ability to produce. Hence, national income increases from time to time which increases economic growth (Sanusi Fattah, 2005)

Inter-Regency/City Intercept in Bengkulu Province

1. South Bengkulu Regency Intercept

South Bengkulu Economic Growth would grow by 136,204 if all values of the independent variables were 0 or constant and insignificant at 5 percent alpha. It is because the probability value was $0.2690 > 0.05$.

2. Rejang Lebong Regency Intercept

The economic growth of Rejang Lebong would grow by 136,362 if all values of the independent variables were 0 or constant and insignificant at 5 percent alpha. It is because the probability value was $0.0638 > 0.05$.

3. North Bengkulu Regency Intercept

North Bengkulu Economic Growth would grow by 136.5052 if all values of the independent variables were 0 or constant and significant at 5 percent alpha. It is because the probability value was $0.0147 < 0.05$.

4. Kaur Regency Intercept

Kaur Economic Growth would grow by 136,27258 if all values of the independent variables were 0 or constant and were not significant at 5 percent alpha. It is because the probability value was $0.2791 > 0.05$.

5. Seluma Regency Intercept

Seluma's Economic Growth would grow by 136,41048 if all values of the independent variables were 0 or constant and significant at 5 percent alpha. It is because the probability value was $0.0781 < 0.05$.

6. Muko-Muko Regency Intercept

Muko-Muko Economic Growth would grow by 136.3768 if all the values of the independent variables were 0 or constant and are not significant at 5 percent alpha. It is because the probability value was $0.0945 > 0.05$.

7. Lebong Regency Intercept

Lebong Economic Growth would grow by 136,31199 if all values of the independent variables were 0 or constant and insignificant at 5 percent alpha. It was because the probability value was $0.2361 > 0.05$.

8. Kepahiang Regency Intercept

Kepahiang's economic growth would grow by 136.47640 if all values of the independent variables were 0 or constant and significant at 5 percent alpha. It was because the probability value was $0.0399 < 0.05$.

Conclusion

From 2006 to 2017, all parameters of human capital increased. However, this increase was considered to be not enough to spur economic growth in districts/cities and provinces. Thus, they could later compete with other provinces in the Sumatra region. The indicator of the average length of studying at school that is still at the junior high school level in almost districts/cities in Bengkulu province should be a very serious concern by relevant government officials. It is because education is expected to increase labor productivity. Educational factors will also affect the level of awareness to stay healthy. Hence, life expectancy is expected to increase and people have productive and quality lives. The role of the government in the field of health and education is expected to be more dominant because human capital is an important motor in developing the region, which demands economic independence in an area.

The variables of the average length of studying at school, skilled workers, life expectancy, maternal mortality, government spending in the health sector, and investment have a significant effect on economic growth in Bengkulu Province. While the variables of unskilled workers, government spending on education, and unemployment have no significant effect on economic growth in Bengkulu province.

During 2006-2017, the economic structure in Bengkulu province was dominated by the agricultural sector. Yet, the trend of the contribution and role of the agricultural sector continued to decline. Besides, it showed the direction of development towards the tertiary and secondary sectors. The agricultural sector is important to continue to be developed due to maintaining the regional food security situation, but in this case, the need for efficiency and productivity in agricultural development. The need for human capital and technology to do this to create industrial-based agriculture. Bengkulu Province is entering an era of massive development in infrastructure from the central government. It is expected that there will be new factories and industries as well as special economic zones that demand quality labor. Therefore, they can be absorbed later.

According to the conclusions that have been described, several things can be suggested as follows, concerning the national program and the focus of the president of the Republic of Indonesia in developing an area where the importance of human resource development is important, the government should prioritize policies in order to improve the quality of human resources in all sectors. The impact can increase labor/worker productivity in all sectors. The budget surplus should be used to increase government spending in the education, health, and infrastructure sectors because the impact can improve economic performance and people's welfare.

To increase the productivity of agricultural workers, the government should improve education for agricultural workers. As for urban areas (non-agricultural sector), in addition to the education improvement program, training programs are also needed for the workforce. Given the important role of education in improving the quality of human resources, the government should make improvements to the education system in Bengkulu. Thus, its impact on development can be more optimal. Increasing the education budget higher than other sectors

is the right policy. Yet, it is necessary to ensure the efficiency and effectiveness of its implementation. Thus, it is in line with its goals and objectives. A development strategy that prioritizes improving the quality of human resources should be used as one of the regional development strategies in Indonesia because the impact can not only create economic growth but also create income distribution. Thus, the objectives of growth and equity development can be achieved simultaneously.

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