

## **CHAPTER II**

### **LITERATURE REVIEW**

#### **A. Theoretical Framework**

##### **1) Human Capital Concept**

In order to implement regional development, economic growth indicator is always used as a benchmark of development success. Economic growth is a measure of the development of output of a region during a certain period, while the output shows the productivity of a region due to an investment. The investment decision is expected to provide a greater return on the investment costs incurred. Common investment is the form of physical and financial investment in the business field. The investment is made at the expense of expenditure in a period to obtain greater expenditure in the next period. However, the principle of investment is not only done in the form of physical, capital, or finance in the field of business but investment in the field of human resources. Investment in human resources will establish the human capital who will give rewards in the form of higher income in the future. Similarly, investment in the field of business, the investment is also done in the field of human resources. Then the sacrifice is the number of funds spent and income opportunities during the investment process. As a

return is a higher income level that will be able to achieve higher levels of spending, that kind of investments are called human capital.

## **2) Concept of Economic Growth**

Economic growth is an indicator to see the performance of the economy, both at national and regional levels. Economic growth is the development of activities in the economy that cause goods and services produced by the population increases. At the country level, all goods and services produced in the country are measured aggregately in the form of Gross Domestic Product (GDP). Economic growth can be measured by changes in real GDP increase over a certain period. According to Todaro and Smith (2006) in Syalkahfi (2016), at the level of individual household or economic growth can be measured by the increase in household income or income per capita.

According to Todaro and Smith (2006) in Syalkahfi (2016), define economic growth as a process of productive capacity building in an economy on an ongoing or continuous basis over time resulting in greater levels of national income and output. There are three main components in economic growth:

1. Capital accumulation, which includes all forms or types of new investments invested in land, physical equipment, and capital or human resources.

2. Population growth which in the following years will increase the number of labor force.
3. Technological advances.

According to Sukirno (2006) as cited in Syalkahfi (2016), several important factors that can realize economic growth include:

1. Land and other natural resources.
2. The number and quality of the population and labor.
3. Capital goods and technology level.
4. The economic system and public attitudes.

The long-term economic growth of a country is not only supported by the increase in physical capital stock and the amount of labor, but also the improvement of the quality of human capital which has a strong influence on the improvement of labor quality and the utilization of technological progress. The technological factor is dynamic and is determined by the quality of human capital. According to the theory of modern growth, economic growth is not only coming from an increase in the number of factors of production in the form of labor and physical capital but also from labor productivity that is closely related to the increase in the quality of human capital (Sukirno cited in Syalkahfi, 2016).

### 3) Theory of Economic Growth

The theory of economic growth grew over time. Some of the prominent theory of economic growth include, as follows:

#### a. Classical Growth Theory

This theory was pioneered by Adam Smith, David Ricardo, Robert Malthus, and John Stuart Mill. According to this theory, economic growth is influenced by four factors, namely population, the stock of capital goods, land area and natural resources, and application of technology. From the four factors, the classical economists emphasized his theory on population growth in influencing economic growth with the assumption of land area and natural resources, and the application of technology is fixed (Alam cited in Syalkahfi, 2016). The description of the theory of classical economic growth is as follows (Alam as cited in Syalkahfi, 2016):

- 1) Economic growth is relatively high when the population is still small, the stock of capital goods quite a lot, and the availability of land which still large.
- 2) Economic growth is not dependent (stationary state) when the productivity of the population decreased due to the reduced of production capacity so that the prosperity of the community and the frequency of economic activity also decreased.

#### b. Theory of Neoclassical growth

The Neoclassical model of economic growth is one of some models of growth explaining the differences in economic growth between countries and one of the main contributors is Robert Solow (Todaro and Smith cited in Syalkahfi, 2016). Theoretically, the basis of Solow's growth theory is the supply side by using the production function as its tool. In simple terms, this theory states that capital production factors and labor are two important factors that determine the economic growth of a country. According to Ananta (2013) as cited in Syalkahfi (2016), the production function is assumed to have a constant return to scale, where each production factor has diminishing returns.

Solow argued that the physical accumulation of capital itself is not sufficient to explain the differences in economic growth between countries. Therefore, the Solow growth model is designed to explain how growth in capital stock, growth in the workforce, as well as technological advancements interact in the economy and how it affects the total output of goods and services within a country. However, it is assumed that saving and technological progress are exogenous. When savings increase then investment increases so capital stocks increase. According to Ananta (2013) cited in Syalkahfi (2016), as capital stock increases, subsequent output increases but output growth due to temporary savings. The Solow

model uses assumptions by focusing on four variables: output (Y), capital (K), labor (L), and knowledge or referred to labor effectiveness (A), at a given time (t). The relationship of the four variables if described in the form of the production function is as follows (Ananta as cited in Syalkahfi, 2016):

$$Y(t) = F( K(t), A(t) L(t) ) \dots\dots\dots (2.1)$$

Where t: time dimension

There are several assumptions to explain the Solow model, they are:

- 1) The main assumption of the Solow model that the production function is "constant return to scale" means that the increase in output has the same proportion as the addition of the input.
- 2) No government intervention.
- 3) Technological advances and savings are exogenous and constant.

#### c. Endogenous Growth Theory

The unsatisfactory performance of Neoclassical theory in explaining sources of long-term economic growth has led to widespread disillusionment with traditional growth theory. New growth theory reflects a new idea of economic growth and development that is a key component of the newly emerging development theory. According to Todaro and Smith (2006) as cited in Syalkahfi (2016), the new growth theory provides a theoretical framework for analyzing endogenous growth, ie GNP growth sourced from a system governing the production process.

The main motivation of this new growth theory is to explain differences in growth rates between countries as well as factors that give greater proportion to the growth observed. So, the new growth theory is better known as the endogenous growth theory because it challenges Solow model assumptions about technological changes that come from outside (exogenous). The endogenous growth model has a structural similarity to the Neoclassical model but is very different in terms of the underlying assumptions and conclusions drawn from it. The most significant theoretical difference comes from the exclusion of the neoclassical assumption of declining marginal outcomes of capital investment, giving rise to increasing returns to scale in aggregate production. Endogenous growth theory seeks to explain the existence of increasing scale of results and long-term growth patterns that vary between countries. According to Todaro and Smith (2006) as cited in Syalkahfi (2016), moreover, since technology still plays an important role in these models, exogenous changes are no longer necessary to explain long-term growth.

Meanwhile, endogenous growth theory emphasizes different growth opportunities in physical capital and knowledge capital. There are diminishing marginal returns for physical capital, but not for knowledge capital. The idea that increased investment in knowledge will increase in growth is the key to connecting the

higher savings rate with a higher balance growth rate. So in the theory of endogenous growth trying to explain the level of technological progress, which in the Solow model is called exogenous variables. This model seeks to explain decisions that determine the creation of science through research and development. The Solow model is developed by Mankiw, Romer and Weil (1992), Wang and You (2002) as cited in Syalkahfi (2016), by incorporating the human capital quality element into the growth model.

To illustrate the idea behind the theory of endogenous growth, it can begin with a simple production function:

$$Y = AK \dots\dots\dots (2.2)$$

Where A is a constant reflecting the level of technology, K in the broader sense includes human capital, then per capita output is  $Y = AK$ . In this production function does not show the content of decreasing capital returns. One additional capital unit produces an additional output unit of A, regardless of existing capital. According to Mankiw (2005) as cited in Syalkahfi (2016), this lack of return on capital is an important difference between the endogenous growth model and the Solow model. Then, how the relationship between production function and economic growth. Assume that some income is saved and invested. Therefore, the accumulation of capital with the equations have used before is:

$$\Delta K = sY - \delta K \dots\dots\dots (2.3)$$



This equation states that a change in the capital stock ( $\Delta K$ ) equals investment ( $sY$ ) minus depreciation ( $\delta K$ ). Combining this equation with  $Y = AK$  production function, then becomes:

$$\Delta Y/Y = \Delta K/K = sA - \delta \dots\dots\dots (2.4)$$

This equation shows what determines the output growth rate  $\Delta Y / Y$ . Where, during  $sA > \delta$ , the income of the economy determines the growth rate forever, even without the assumption of exogenous technological progress (Mankiw as cited in Syalkahfi, 2016).

#### d. New Growth Theory

This theory provides a theoretical framework for analyzing endogenous growth, economic growth is a result of the economic system. According to Romier (1994) cited in Todaro (2004) then cited in Syalkahfi (2016), this theory assumes that economic growth is more determined by the production system, not from outside the system. Technological advances are endogenous, growth is part of the decisions of economic actors to invest in knowledge. The role of capital is greater than just part of income when capital is growing not only physical capital but about human capital.

Capital accumulation is a major source of economic growth. The definition of capital is expanded by incorporating science models and human resource. Technological change is not something that comes from outside the model or exogen, but technology is part of the

process of economic growth. In the theory of endogenous growth, the role of investment in physical capital and human capital contributes to long-term economic growth. Savings and investments can promote sustainable economic growth (Mankiw as cited in Syalkahfi, 2016).

#### **4) Development Concept**

According to Sukirno (1985) cited in Suryanto (2011), although economic development policies have always aimed to enhance the welfare in the broadest sense, economic development activities are always seen as part of the development effort by a society. Economic development includes only the business of society to develop economic activities and enhance the level of income of the community, while the overall development efforts include also the development efforts of social, political and cultural. With the restrictions above, the definition of economic development is generally defined as a process that causes per capita income of a society increased in the long term.

The idea of development (paradigm) has shifted, from production centered development in the 60s to a development paradigm that emphasizes the distribution of development outcomes during the 70s. Furthermore, in the decade of the 80s emerged a development paradigm oriented to the fulfillment of basic needs of society (basic

need development), and ultimately towards the human-centered development paradigm that emerged in the 1990s. According to Ananta (2013) as cited in Syalkahfi (2016), there are six reasons why this human development paradigm is important:

1. The ultimate development is aimed at improving human dignity and prestige.
2. Carry out a mission to eradicate poverty.
3. Encourage maximal productivity improvement and improve control over goods and services.
4. Maintaining nature conservation (environment) and maintaining ecosystem balance.
5. Strengthen the base of civil society and political institutions to develop democracy.
6. Attention for socio-political stability conducive to the implementation of development.

The essence of development is to form autonomous individuals enabling them to actualize their best potential optimally. This is a solid foundation for the realization of human beings featured as the main capital formation of national competitiveness in the face of international competition. In general the nature of national development is the whole human development and development of the whole society. The essence of this development implies that national development pursues balance and harmony between

progress also satisfaction outside and inside. According to Basri (2002) cited in Syalkahfi (2016), continuous national development is directed to improve the quality of life of the nation so that it is always able to realize the tranquility and well-being of life and inwardness. Human development is a development paradigm that places human (population) as the focus and the ultimate goal of all development activities, namely the achievement of control over the resources reflected in the income to achieve a decent life, the improvement of education is reflected in the ability to read and write skills and skills to participate in community and economic activities (BPS, 2006).

Human development is a process of enlarging people's choices. Based on these definitions can be deduced that the focus of development of a country is population, because the population is the real wealth of a country. The concept or definition of human development basically includes a vast development dimension. This definition is broader than the definition of development that emphasizes only on economic growth. In the concept of human development, development should be analyzed and understood from the human point of view, not only from its economic growth. Development should prioritize the population as a center of attention and development with the aim of enlarging the choices for the population, not just to increase their income. Therefore, the concept

of human development must be centered on the population as a whole, and not just on the economic aspect alone. Human development is concerned not only in efforts to improve human capabilities but also on efforts to utilize human capabilities optimally. Human development is the basis for determining development objectives and in analyzing the options for achieving them (BPS, 2006).

Based on Human Development Report (HDR), the human development paradigm consists of four main components, namely: (1) Productivity, communities must be able to increase their productivity and participate fully in the process of earning and wage employment. Economic growth, therefore, is one part of the kind of human development; (2) Equity, communities should have access to equitable opportunities. All obstacles to economic and political opportunities should be removed so that people can participate and benefit from this opportunity; (3) Sustainability, access to opportunity must be ensured not only for the present generation, but also for future generations. All forms of physical capital, human, living environment, must be equipped; and (4) Empowerment, development must be done by the community and not just for them. Communities must participate fully in taking decisions and processes that affect their lives (BPS, 2004).

Human development is aimed at increasing people's participation in all development processes and activities. The success of today's development is often seen from the achievement of the quality of its human resources. In order to achieve these objectives, local governments have made efforts to improve the quality of human resources in their areas, both from the physical aspect (health), the intellectual aspect (education), the economic welfare aspect (purchasing power), and the morality aspect (faith and devotion) people's participation in development will automatically increase (BPS, 2004).

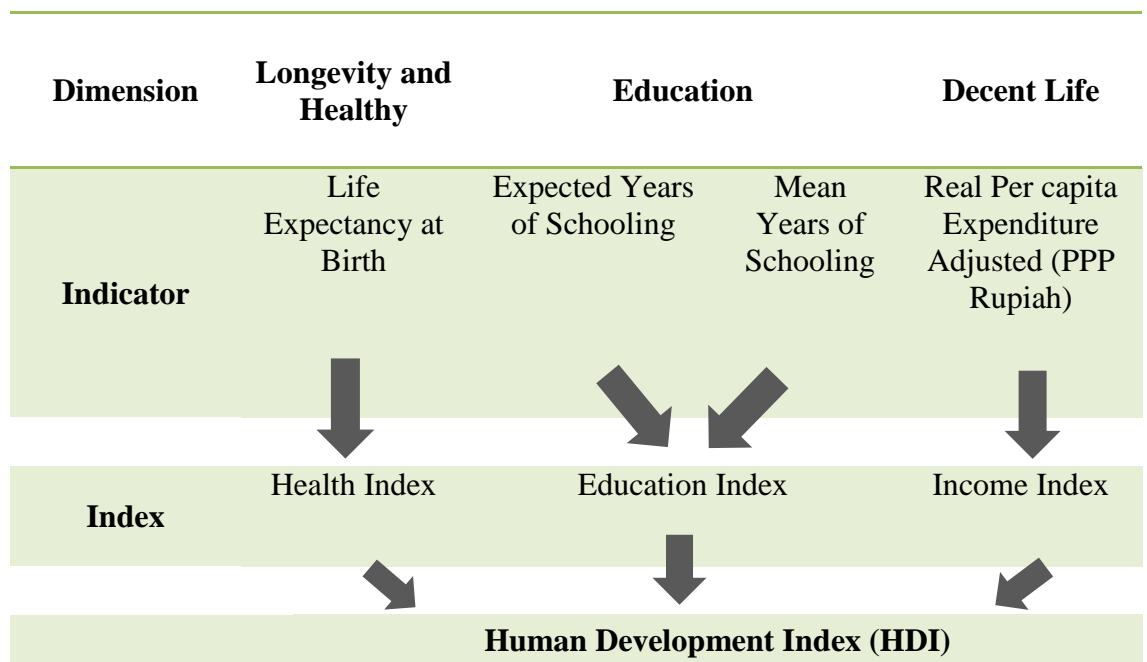
##### **5) Human Development Index (HDI)**

According to BPS (2016), HDI is a composite index used to measure the average achievement of a country in three basic dimensions of human development, namely: (1) Health dimension or longevity; (2) the dimension of education or knowledge; and (3) Economic dimension or standard of living. The value of this index ranges from 0-100. In general, HDI is composed of four indicators that describe the three most fundamental dimensions of human development. The dimension of life opportunity is measured by the indicator of life expectancy of the population at birth (life expectancy at age 0 or  $e_0$ ). The dimension of knowledge is measured by two indicators, namely expected years of schooling and mean years of schooling of the working age. High standards of life are

measured by indicators of real per-capita income that have been adjusted to the purchasing power parity (PPP) in the region concerned. The concept of human development in the previous section states that human development is not merely seen from an economic perspective, but includes a broader dimension. Until now, HDI has become a composite indicator that is representative enough to describe the achievement of human development quality among regions in Indonesia. This index provides a broader perspective for assessing human progress as well as reviewing the complex relationship between income and welfare (UNDP, 2004).

In the HDI calculation using new methods that were adopted in 2010, longevity and health dimensions measured using indicators of population life expectancy at birth in terms of years. Life expectancy at birth is an estimate of the average length of life from birth to be achieved by a group of population who were born in that year. The higher the Life Expectancy of a community indicates the high degree of public health (Ananta as cited in Syalkahfi, 2016). The dimensions of knowledge are measured using two indicators: expected years of schooling and mean years of schooling on working age (25 years and over) in years. According to BPS (2016), indicator is mean years of schooling in the new method using a reference population ages 25 years and over with consideration has completed apprenticeship. Reference population is 25 years and above is better

able to describe the actual condition compared with the age group 15 years and over. A decent dimension of life is measured by per capita expenditure adjusted for purchasing power parity (PPP) in rupiah. The phases of Human Development Index calculation are summarized in Figure 2.1.



Source: BPS, 2016

**Figure 2.1 Stages of Calculation of Human Development Index**

#### 6) Component of Human Development Index

Changes in HDI are influenced by three indicators, namely: life expectancy index, education index, and purchasing power index. Therefore, changes in HDI are closely related to the changes of the three indices. There are a maximum and minimum value of the HDI indicators shown in Table 2.1.



**Table 2.1 Minimum and Maximum Score for Calculation of Indicator Index**

Indicators	Unit	Minimum		Maximum	
		UNDP	BPS	UNDP	BPS
Life Expectancy at Birth	Year	20	20	85	85
Expected Years of Schooling	Year	0	0	18	18
Mean Years of Schooling	Year	0	0	15	15
Real Per capita Expenditure Adjusted		100 (PPP U\$)	1.007.436 (Rp)	107.721 (PPP U\$)	26.572.352 (Rp)

Source: BPS, 2016

a) Health Index

Health is the most important element of human capital in addition to education. Health dimension represented by a long and healthy life of the main focus of human development, because of a long and healthy life greatly determine the level of productivity that is generated by a region or country. It means, the health dimension also has a central role in realizing human welfare. From many indicators in the field of health, life expectancy of the population at birth is considered capable to describe the health quality of the population in general so selected as an indicator of health. The higher life expectancy in a region reflects the increasing health of the population. Increasing health status will encourage increased labor productivity so that the level of income received will also increase. Increased income becomes one of the prerequisites for improving the degree of community welfare.

The life expectancy of the population at birth is denoted by  $e_0$ . The figure represents the approximate average age or year that a group of people who will be born at a given time to the end of their lifetime, assuming the mortality pattern is fixed. Figures produced  $e_0$  refers to the state of 3-4 years of the survey. Surveys are conducted periodically by Susenas (National Socio-Economic Survey). The indirect method used to estimate life expectancy is to use MCPDA (Micro Program for Demographic Analysis) software or Mortpak for Windows software. The variables used were the average number of children born alive and the average number of children who are still alive of ever-married women aged 15-49 who are grouped according to the five-year age groups. Based on the life expectancy, the value of health index of the region concerned can also be calculated by the formula:

$$Health\ Index = \frac{(AHH - AHH_{min})}{(AHH_{max} - AHH_{min})} \dots \dots \dots (2.5)$$

Where:

$AHH$  = Life Expectancy (*Angka Harapan Hidup*)

$AHH_{min}$  = The minimum value of  $AHH$ , UNDP set at 20 years

$AHH_{max}$  = The maximum value of  $AHH$ , UNDP set at 85 years

The health index values are between zero (0) and one (1). The closer to zero shows worsening conditions and getting closer to one

indicates an improving state. In order to simplify the interpretation, the index value can be expressed in units of hundreds or multiplied by 100. The index value has no special meaning when it stands alone, but when compared with the same number of other regions can be seen achievement comparative description of the health development among regions.

b) Education Index

Knowledge becomes one of the most important elements of human capital that determines the level of productivity and competitiveness of a nation in global life. The educated and skilled labor force as the output of the formal and informal the education process is a component affecting the continuity of the production process of goods and services. Indirectly it will affect the level of welfare of the population in general. Among the many educational indicators that exist, the average length of schooling and long-term school expectations are considered to be representative enough to illustrate educational development achievements by population in a region.

- Mean Years of Schooling

The concept of years of schooling is defined as the length of time a person attends a formal education starting from elementary school

entrance to the last class completed at the last level of education. Mean years of schooling is a measure of the accumulated educational investment achieved by an individual so that this measure at the same time describes the educational attainment of an individual. Indicators that can be calculated based on the length of schooling of each individual is called mean years of schooling.

Initially, UNDP used the mean years of schooling combined with literacy rates as an indicator of education in Human Development Index. UNDP reference population used in the calculation of the mean years of schooling is limited to the population aged 25 years and over. These limits are necessary to make the resulting figures reflect the actual conditions, as some of the population less than 25 years old are still in school or have not completed their schooling. According to BPS (2016), due to data limitations in the HDI calculation since 1995, the mean indicator of the schooling year of the population was replaced by GER (Gross Enrollment Ratio). In the 2010 HDI calculation, the GER indicator was again replaced by the RLS indicator. In Indonesia, Susenas data are available in annual series and valid enough to calculate the mean years of schooling of the population, so in the HDI calculations in Indonesia, the RLS indicator is still used. The population reference used is refined from the population aged 15 years and over to 25 years and over. The consequence is that the resulting figure will tend to be lower since the

population in the 15-25 year age group tends to have a higher schooling duration. According to BPS (2016), the mean years of schooling can be calculated by the following formula:

$$\bar{X} = \frac{\sum x_i}{n} \dots \dots \dots (2.6)$$

Where :

$\bar{X}$  : The population mean years of schooling aged 15 years and over

$x_i$  : The duration of individual schools aged 15 years and over

$n$  : The number of population aged 15 years and over

- Expected Years of Schooling

The expected years of schooling indicator began to be used in Human Development Index calculations in 2010 to replace the Literacy Rate indicator which is deemed to be incapable of explaining the different achievements of education quality among regions, as some regions already have levels almost 100 percent. The expected years of schooling is defined as the length of the school (in years) are expected to be perceived by children at a certain age in the future. The expected years of schooling is calculated on people aged 7 years and over because it follows the government's early age-related policies in compulsory education. According to BPS (2016), the expected years of schooling calculations are performed using this following formula:

$$HLS_a^t = FK_x \sum_{i=a}^n \frac{E_i^t}{P_i^t} \dots \dots \dots (2.7)$$

Where:

$HLS_a^t$  = The expected years of schooling at age  $a$  in year  $t$

(7 years and over)

$E_i^t$  = The number of population at age  $i$  who entrance for

Schooling at year  $t$

$P_i^t$  = The number of population at age  $i$  in year  $t$

$i$  = Age ( $a, a+1, a+2, \dots, n$ )

$FK$  = Factor of boarding correction

Boarding correction factors calculated from the ratio between the number of school students and students of the habitation with a population above the age of 7 years plus one.

- Calculation of Education Index

According to BPS (2016), the formula for calculating the education index is illustrated as follows:

$$Education\ Index = \frac{I_{RLS} + I_{HLS}}{2} \dots \dots \dots (2.8)$$

The formula for the calculation of the index of mean years of schooling and the literacy rate index each expressed as follows:

$$I_{RLS} = \frac{(RLS - RLS_{min})}{(RLS_{max} - RLS_{min})} \dots \dots \dots (2.9)$$

$$I_{HLS} = \frac{(HLS - HLS_{min})}{(HLS_{max} - HLS_{min})} \dots \dots \dots (2.10)$$

Where:

$I_{RLS}$  = Mean years of schooling index

$RLS$  = Life expectancy

$RLS_{min}$  = Minimum value of RLS, UNDP set 0 year

$RLS_{max}$  = Maximum value of RLS, UNDP set 15 years

$I_{HLS}$  = Expected years of schooling index

$HLS$  = Expected years of schooling

$HLS_{min}$  = Minimum value of HLS, UNDP set 0 year

$HLS_{max}$  = Maximum value of RLS, UNDP set 18 years

Index values are between zero (0) and one (1), closer to zero indicates a worsening state and closer to one indicates an improving state.

c) Income Index (Purchasing Power Parity Index)

Purchasing Power Parity (PPP) is an indicator used to look at the economic condition of society in calculating HDI. This purchasing power parity more reflects the economic ability of the community to meet its consumption needs and extremely different from the per

capita GRDP also known as per capita income. In order to measure decent living standards, per capita GRDP data can not be used because it is not a sensitive measure of people's purchasing power. Therefore, the calculation of purchasing power of the population using adjusted per capita consumption. To calculate the income index used the formula of BPS as follows:

$$Income\ Index = \frac{\ln(income) - \ln(income_{min})}{\ln(income_{max}) - \ln(income_{min})} \dots \dots \dots (2.11)$$

The income index shows the purchasing power of the people, therefore the higher the income index the higher the per capita purchasing power of the population. According to Syalkahfi (2016), increased purchasing power implicitly showed an increasing prosperity through income growth and price stability, which in turn increases the quality of human development, through changes in the Human Development Index (HDI). The concept assumes that an increase in purchasing power index or an increase in real per capita expenditure adjusted in line with the increase in absolute and real income. Nevertheless, an extreme case may occur, where an increase in real expenditure per capita is more due to inflation stability incentives, so the possibility of real absolute revenue increases does not occur.

Referring to the three HDI indicators, the HDI number can be calculated using the formula (BPS, 2016):



$$HDI = \sqrt[3]{I_{health} \times I_{education} \times I_{income}} \dots \dots \dots (2.12)$$

HDI tries to rank all countries on a scale of 0 (the lowest level of human development) to 100 (the highest level of human development). The greater the value of HDI shows the better quality of human development. HDI values can be classified into four categories:

- HDI group of "low" by the criteria of the HDI value < 60
- HDI group of "medium" with the criteria of  $\leq 60$  HDI value < 70
- HDI group of "high" with the criteria of  $\leq 70$  HDI value < 80
- HDI group of "very high" criteria HDI value  $\geq 80$

## 7) Government Expenditure

In the State Budget (APBN), the expenditures of the Indonesian government can be broadly grouped into two categories: regular expenditures and development expenditures. Regular expenditures basically include spending items to finance the implementation of daily administration of the government including personnel expenditures, goods expenditures, various subsidies (local subsidies and price subsidies), installments and government debt, and other expenditures. According to Putra (2015) as cited in Syalkahfi (2016), while expenditure for development is an expenditure in order to increase public capital in the form of physical infrastructure. In fiscal policy, there are several budget policies, namely balanced budget,

surplus budget and deficit budget. In a general sense, a balanced budget is a condition in which the income is equal to expenditure ( $G = T$ ). The surplus budget is spending less than revenue ( $G < T$ ). Meanwhile, the deficit budget is the expenditure budget greater than the revenue ( $G > T$ ). According to Syalkahfi (2016), a surplus budget is used if the government wants to overcome the inflation problem, while the deficit budget is used if the government wants to overcome unemployment problems and increase economic growth. According to Ananta (2013) cited in Syalkahfi (2016), if the government plans to increase economic growth and reduce unemployment, the government can increase expenditure.

- Type of Government Expenditure

Government expenditures consists of :

- 1) Regular Expenditure

Routine expenditures are expenditures used for government maintenance and administration that include personnel expenditures, goods purchases, interest payments on debt, subsidies and other routine expenditures. Through regular expenditure, the government can carry out its mission in order to maintain the smooth operation of government, the operational activities and maintenance of state assets, the fulfillment of government obligations to third parties, the protection of the poor and the underprivileged and maintaining economic stability

(Ananta as cited in Syalkahfi, 2016). Routine budget plays an important role to support the mechanism of the government system and improving the efficiency and productivity that will support the achievement of the goals and objectives of each stage of development. The increase in government spending is usually derived from the post of personnel expenditure allocated to raise the salaries of employees and retirees. In addition, it may also occur in the post of foreign debt interest payments and domestic. According to Ananta (2013) cited in Syalkahfi (2016), the most fundamental characteristic differences between domestic and foreign loans are at the time of the implications when a refund. In the case of domestic borrowing, debt interest payments by the government would be enjoyed by the people of Indonesia because there is a transfer of income by groups of people who pay taxes to community groups as creditors. Meanwhile, in the case of foreign loans, there is a different flow of economic impact (multiplier effect). Parties who receive loan repayment is in foreign creditor (Ananta as cited in Syalkahfi, 2016).

## 2) Development Expenditure

Development expenditures are expenditures used to finance development in the economic, social and general fields and are to increase public capital in the form of development of both physical and nonphysical infrastructure implemented within a

certain period. Physical and non-physical development budgets are always adjusted to the mobilized funds. Then, the funds are allocated to various fields in accordance with the priorities that have been planned. The role of development budget is more emphasized on efforts to create stable and conducive conditions for the ongoing economic recovery process while providing stimulus for national economic growth. According to Suminto (2004) cited in Syalkahfi (2016), in relation to the overall management of the state budget with limited financing sources available, the achievement of development targets should be optimized.

In order to cover the gap between development needs and the ability of domestic funds, project finance is still needed. Project financing is sourced from abroad in the form of project loans and utilized for human resources development in the field of education, health and social welfare in order to support social safety net programs, provision of transportation facilities and infrastructure, agricultural development, power electricity and irrigation. According to Basri (2002) as cited in Syalkahfi (2016), the procurement of infrastructure supporting defense, telecommunications and urban infrastructure development is also carried out.

According to Law No.17 of 2003, the budgeting system refers to internationally accepted practices. According to the GFS (Government Financial Statistics) Manual 2001, the state budgeting system implicitly uses a unified budget system, where there is no separation between routine and development expenditures, so the classification according to the economy will be different from the previous classification. According to Ananta (2013) as cited in Syalkahfi (2016), since 2005 a budget unification has been set between routine expenditure and development spending as well as the classification of central government expenditures by type of expenditure, organization and function.

The various changes and adjustments to the new state expenditure format and structure, the state expenditure by economic classification (type of expenditure) consists of (i) personnel expenditure, (ii) goods expenditure, (iii) capital expenditures, (iv) debt interest payments, (v) subsidies, (vi) grants, (vii) social assistance, and (viii) other expenditures. While expenditures for the region, that is applicable so far is consisted of (i) balancing funds, and (ii) special autonomy funds and adjustments. According to Suminto (2004) cited in Syalkahfi (2016), with the changes in the format and structure of expenditure by type of expenditure then automatically there is no

separation between regular and development expenditure (unified budget).

There are some basic understanding of the important components of the expenditure include (Suminto as cited in Syalkahfi, 2016) :

- a. Employee expenses accommodate all state expenditures used to pay the salaries of employees, including the benefits which they are entitled, and pay honoraria, overtime, special allowances and personnel expenditures, and pay pensions and health insurance (social contributions). The classification includes salary expenditures of projects that have been classified as development expenditures. With this format, it will show an overlapping post between personnel expenditures classified as routine and development. This is where the efficiency will be achieved.
- b. Spending on goods is used to finance government operations for the procurement of goods and services, and the cost of maintaining state assets. Likewise, the reverse is often classified as development expenditure.
- c. Capital expenditure accommodates all state expenditures allocated for the purchase of investment goods (in the form of fixed assets and other assets). The capital expenditure item is detailed on (i) fixed asset / physical capital expenditures, and (ii) other asset / non-physical capital expenditures. In practice, most

other intangible expenditures consisting mostly of non-physical expenditures by majority consist of personnel, interest and travel expenditures not directly related to investments for development.

- d. The subsidy accommodates all state expenditures allocated to pay the burden of subsidies on certain vital and strategic commodities that affect the livelihood of the people, in order to maintain price stability and also aimed to reach most of the community. These subsidies are allocated through state enterprises and private companies.
- e. There is a type of subsidy that actually does not have subsidy elements so far, then the spending will be classified as social assistance. Social assistance accommodates all public expenditure allocated to the transfer of money or goods given to the population, in order to protect against the risk of social services, such transfers for the payment of social compensation fund.
- f. Expenditures for the regions shall accommodate all central government expenditures allocated to the regions, whose utilization shall be entirely given to the regions.

## **8) Working Labor Force**

Labor force is a working-age population of 15-64 who has employment but is temporarily unemployed and unemployed. While not the labor force is a working-age population of 15 to 64 years who

have no economic activity, either because it is still in school, taking care of the household or implementing other activities. A labor force classified as a worker if someone who undertaking economic activities with the intention of obtaining income or profit, is at least one hour without a stop in the past week. These activities include unpaid worker activities that assist in a business or economic activity. Meanwhile, the non-labor force is a group of people who do not have economic activity either because they are still in school, taking care of households or carrying out other activities, and those who have not been able to do activities such as those belonging to the previous category are elderly, and others.

#### **9) Relationship of Government Expenditure on Health Sector toward Economic Growth**

Government expenditure is used as a form of government investment in improving the country's economy. In improving the quality of human resources, the government needs to pay attention to spending on education and health sectors. Health expenditure reflects the government's efforts in providing services to the public in the sector of health and as an effort to fulfill the government's commitment in Law No.36 of 2009 concerning health, that the allocation of health budget is 5%. Health is a fundamental necessity for every human being, without public health cannot generate a



productivity for the country. According to Setiawan (2006) as cited in Bastias (2010), associated with the human capital theory that human capital plays a significant role, even more important than technological factors in spurring economic growth. Health indicates that the increase in government expenditure on health sector has proven to be quite large on the performance of the sector. Given the magnitude of the effect of government spending on improving the performance of health, it is necessary to gradually increase the effort of government to its expenditure on the health sector. The low capacity of local budgets to increase the budget allocation for the health sector implications dominance of the central government as a source of financing.

#### **10) Relationship of Government Expenditure on Education Sector toward Economic Growth**

Economic growth theory develop nowadays is based on the production capacity of manpower in the development process which is called human capital investment. This means the improvement of the community's ability become the most efficient support for the development of a region. The assumption used in the theory of human capital is that formal education is a dominant factor for producing high-productivity society. The theory believes that invest in education as an investment in order to increase community

productivity. Investment in education is absolutely necessary, so the government should be able to build good educational facilities and systems. The budget allocation of government expenditure in education is a tangible form of investment to increase community productivity. Education budget of 20% of total State Budget and Local Budget in accordance with Article 49 of Law No.20 of 2003 article 1. According to Setiawan (2006) as cited in Bastias (2010), the implication of development in education is human life will be more qualified. In relation to the economy in general (national) the higher the quality of life of a country, the higher the rate of growth and prosperity of the country. Then, the higher quality of life or investment of high-quality human resources will have implications for the national economic growth rate.

### **11) Relationship of Human Development Index toward Economic Growth**

The relationship between human development and economic growth is a strong two-way relationship. On the one hand, economic growth provides sources that allow sustainable development in human development. Meanwhile, sustainable development in the quality of human capital is an important contributor to economic growth. Economic growth provides direct benefits to human development by increasing income. According to Ranis (2004) cited

in Syalkahfi (2016), the increase in income will increase the allocation of household expenditures for more nutritious food and education, especially in poor households. Based on Sen (1999) as cited in Syalkahfi (2016), in other words, the increase in income contributes directly to increasing the capability of the population. Social development is an explicit development approach that seeks to integrate economic and social development processes. Social development cannot work properly without economic development, while economic development is meaningless unless followed by increasing social welfare of the population as a whole. Economic development or more precisely economic growth is a requirement for the achievement of human development because with economic development guaranteed an increase in productivity and increase income through job creation. Human development level is relatively high, affecting the economic growth through the capabilities of the population and, consequently, increased productivity and creativity. With the increased productivity and creativity, the population can absorb and manage the resources that are essential for economic growth.

## **12) Relationship of Working Labor Force toward Economic Growth**

According to Todaro (2000) as cited in Rustiono (2008), population growth and labor force growth are traditionally regarded

as one of the positive factors that spur economic growth. Based on Simanjuntak (1985) cited in Rustiono (2008), stated that labor force includes people who have or are working, looking for work and do other activities, such as going to school and taking care of the household. The number of working labor force is a description of the conditions of available employment. The greater the available employment will lead to increased total production in a region. The positive or negative effects of population growth depend on the ability of the regional economic system to absorb and productively utilize the increase in labor. The capability is influenced by the level and type of capital accumulation and the availability of input and supporting factors such as managerial and administrative skills. In a simple model of economic growth, generally, the definition of labor is defined as a homogeneous labor force. According to Lewis (1954) cited in Todaro (2004) then as cited in Suryanto (2011), labor force is homogeneous and unskilled considered able to move and shift from the traditional sector to the modern sector smoothly and in limited quantities. In such circumstances, labor supply contains high elasticity. Increased demand for labor (from traditional sector) comes from the expansion of modern sector activities. Thus, one of the factors that influence the economic growth is labor.

## **B. Previous Research**

Previous research on human resource investments has been largely done, in Table 2.2 shows previous research that has been studied. There are many studies conducted by several researchers on government expenditure and economic growth. A case study in Switzerland studied by Estache in 2007, which examined the growth effects of public expenditure on the state and local level: evidence from a sample of rich government. The study found that the strong negative relationship between government size and economic growth, but the negative relationship can only be applied to rich countries with broad public sectors. Developing countries are more oriented in developing government measures for the protection of property rights and establishing cooperative relationships with other countries.

Different from the research conducted by Sodik in 2007 : a case study in Indonesia used panel data studied by. The results found the regional economic growth for periods 1993-2003 is influenced by government investments, government consumption, labor force and rate openness economic province. However, private investments do not affect to regional economic growth.

Then a different study was further investigated by Anggraeni in 2017, which analyzed about “The influence of government spending on education, health, and agriculture sectors towards Indonesia's economic growth in the period of 1970-2015”. The study found that Government

expenditure variable in the education sector has a positive effect on GDP of 1,19% in the long run and 1,58% in the short run. Government expenditure variable in the health sector has a positive effect on GDP of 0,37% in the long run and 0,32% in the short run. Government expenditure variable in agriculture positively affects GDP by 0,06% in the long run and 0,09% in the short run. Government expenditure variable in the education, health and agriculture sectors simultaneously affect both GDP in the long run and short run.

Compared with research conducted by Bastias in 2010 who examined the analysis of the effect of government expenditure on education, health and infrastructure on the economic growth of Indonesia in the period 1969-2009. The research found that in the short term, only the government's expenditure variable on transportation has a significant positive effect on economic growth. Government spending on education, health and housing does not significantly affect economic growth. In the long term, government spending on housing and transportation variables significantly affects economic growth with a positive sign. Government spending on education and health variables does not affect economic.

While research conducted by Kodar in Central Java in 2014, analyzed about "The influence of human capital investment on economic growth in Central Java" which used multiple regression with single equation model regression. The researcher concluded that the variable of working labor force is significant to economic growth (GRDP) at 1 percent level of

significance. The transmigration and unemployment variables have no significant effect on economic growth at the level of significance to 10 percent.

In contrast to this research, which analyzed the factors affecting human resource investment towards economic growth in Java period of 2010-2016. This research used panel data analysis with Fixed Effect Model method. The variables used in this study include government expenditures on health, government expenditures on education, Human Development Index (HDI), labor force who worked and economic growth (GRDP).

**Table 2.2 Previous Research**

No	Title and Author	Object and Period	Research Purpose	Analysis Method	Conclusion
1	Growth Effects of Public Expenditure on the State and Local Level: Evidence From a Sample of Rich Governments, Christoph A. Schaltegger & Benno Torgler (2006)	26 regions in Switzerland	Analyze the growth effects of public expenditure on the State and local level from a rich government.	Linear regression based on panel data	<ul style="list-style-type: none"> <li>• The strong negative relationship between government size and economic growth, but the negative relationship can only be applied to rich countries with broad public sectors.</li> <li>• Developing countries are more oriented in developing government measures for the protection of property rights and establishing cooperative relationships with other countries.</li> </ul>
2	Agglomeration and Economic Growth: The Role of Regional Characteristics of Indonesia, Didi Nuryadin, Jamzani Sodik and Dedi Iskandar (2007)	Indonesia, period of 1993-2003	Examine the effect of agglomeration on economic growth using data from 26 Provinces throughout Indonesia during the period 1993-2003.	General Least Square (GLS)	<ul style="list-style-type: none"> <li>• The agglomeration variable has no effect on the regional economic growth rate.</li> <li>• The variable of the labor force rate has a significant effect on economic growth.</li> <li>• Inflation rate variable significantly affects economic growth with a negative sign.</li> <li>• Openness rate variable has a direction consistent with theory although with relatively small coefficients.</li> </ul>



					<ul style="list-style-type: none"> <li>• The level of education has no significant effect on the rate of economic growth.</li> </ul>
3	Government Expenditure and Regional Economic Growth: Case Study of Panel Data in Indonesia, Jamzani Sodik (2007)	Indonesia, period of 1993-2003	Examine the effect of government expenditure on regional economic growth by using the data in Indonesia for periods of 1993-2003.	General Least Square (GLS)	<ul style="list-style-type: none"> <li>• The results found the regional economic growth for periods 1993-2003 is influenced by government investments, government consumption, labor force and rate openness economic province.</li> <li>• However, private investments do not affect to regional economic growth.</li> </ul>
4	Analysis the Effect of Government Expenditure on Education, Health and Infrastructure on Economic Growth of Indonesia Period 1969-2009, Desi Dwi Bastias (2010)	Indonesia, period of 1969-2009.	Analyze the effect of government expenditure on education, health and infrastructure on Indonesia's economic growth during the period 1969-2009.	Error Correction Model (ECM)	<ul style="list-style-type: none"> <li>• In the short term, only the government's expenditure variable on transportation has a significant positive effect on economic growth.</li> <li>• Government spending on education, health and housing does not significantly affect economic growth.</li> <li>• In the long term, government spending on housing and transportation variables significantly affects economic growth with a positive sign.</li> <li>• Government spending on education and health variables does not affect economic growth.</li> </ul>
5	Analysis the Effect of Government	Indonesia, period of 1970-2015	In order to know the effect of government expenditure on	Error Correction Model	<ul style="list-style-type: none"> <li>• Government expenditure variable in the education sector has a positive effect on GDP of 1,19% in the long run and 1,58%</li> </ul>

	Expenditure on the Education, Health, and Agriculture Sector towards Indonesia's Economic Growth 1970-2015, Merlin Anggraeni (2017)		several sectors (education, health, and agriculture) on Indonesia's economic growth in the long-term and short-term.	(ECM)	<p>in the short run.</p> <ul style="list-style-type: none"> <li>• Government expenditure variable in the health sector has a positive effect on GDP of 0,37% in the long run and 0,32% in the short run.</li> <li>• Government expenditure variable in agriculture positively affects GDP by 0,06% in the long run and 0,09% in the short run.</li> <li>• Government expenditure variable in the education, health and agriculture sectors simultaneously affect both GDP in the long run and short run.</li> </ul>
6	The Effect of Human Resource Investment and Capital Investment on Per Capita Income of Indonesian Society, Didi Setyopurwanto and M.Pudjihardjo (2013)	Indonesia, period of 2006-2012	Analyze the influence of human resource investment and capital investment on per capita income of Indonesian society.	Fixed Effect Model (FEM)	<ul style="list-style-type: none"> <li>• Government spending on education, health and domestic investment has a significant effect on per capita income.</li> <li>• Foreign investment has no significant effect on the per capita income of the community.</li> </ul>
7	Determinants of Economic Growth Regional in North	Sumatera Utara, period of 1993-2006	Analyze the impact of the industrial added value of the	General Least Square (GLS)	<ul style="list-style-type: none"> <li>• Value-added of regional industries have a significant influence on regional economic growth.</li> </ul>

	Sumatra, Marganda Simamora and Sirajuzilam (2008)		region, local government spending, the density of population on economic growth.		<ul style="list-style-type: none"> <li>Local government spending has a significant effect on regional economic growth.</li> <li>Population density has no significant effect on regional economic growth due to, the low quality of human capital of the labor force who is active in economic activity.</li> </ul>
8	An Analysis the Influence of Investment, Labor and Government Expenditure on Economic Growth in Central Java Province, Deddy Rustiono (2008)	Central Java, period of 1985-2006.	Analyzing the effect of labor force, investment: PMA realization, PMDN realization and local government expenditure on GRDP of Central Java Province during the period of 1985-2006 .	Ordinary Least Square (OLS)	<ul style="list-style-type: none"> <li>Labor force, private investment (PMA and PMDN) and local government spending have a positive impact on GDP growth in Central Java Province.</li> </ul>
9	Analysis the Influence of Human Capital Investment on Economic Growth in Central Java, Nur Kodar (2014)	Central Java Province, period of 1988-2012	Analyze the influence of human capital investment factors on economic growth in Central Java.	Multiple regression with single equation model regression	<ul style="list-style-type: none"> <li>The variable of the labor force who worked significant to economic growth (GRDP) at 1 percent level of significance.</li> <li>The transmigration and unemployment variables have no significant effect on economic growth at the level of significance to 10 percent.</li> </ul>
10	An analysis the Effect of Labor,	Surakarta, Boyolali,	Analyze the effect of labor, education	Least Square Dummy	<ul style="list-style-type: none"> <li>Labor variable, education levels and government expenditure have a positive</li> </ul>

	Education Level and Economic Growth on Government Expenditure in Subosukawonosraten in 2004-2008, Dwi Suryanto (2011)	Sukoharjo, Karanganyar Wonogiri, Sragen and Klaten, period of 2004-2008	level, and government expenditure on economic growth in Subosukawonosraten	Variable (LSDV)	and significant impact on economic growth in the Subosukawonosraten region.
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### **C. Research Framework**

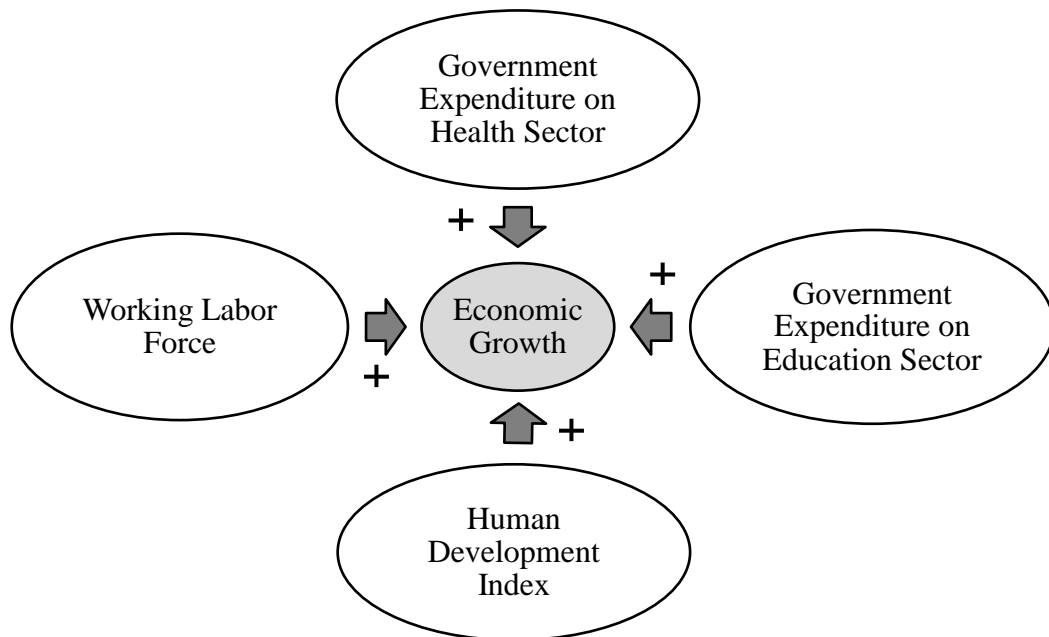
Currently, Indonesia is in the stage of development where the improvement of human resources is needed in the development process. Improving the quality of human resources, according to Mankiw can increase economic growth. In order to realize the economic development which is growth and equity, it is necessary to build human capital through human resource investment. The most important indicators in human development that are used to measure human resource investment are education and health. Development in these sectors can be realized by the government through development expenditures. The government expenditure on the education and health sectors over the long term will improve the quality of human resources so that it will increase production efficiency and will eventually increase economic growth.

In order to increase economic growth in Java is required factors that can affect regional economic growth, such as labor force who worked. Growth in working labor force is regarded as one of the positive factors that spur economic growth, thus increasing working labor force will lead to higher productivity and will encourage economic growth. The education sector plays a major role in establishing the ability of a developing country to absorb modern technology and develop production capacity in order to create sustainable growth and development. Besides, the role of the government, either directly or indirectly, will increase the total output,

according to Lin (1994) said there is something important that is in line with the role of government where the government can raise growth.

Previous research has discussed the effects of government spending on education and health, the Human Development Index and labor force who worked against economic growth. Research conducted by Kodar (2014) which discusses the influence of Human Capital Investment on economic growth in Central Java. The results obtained are the factors of labor force who worked have a significant effect on economic growth. According to Sja'fii's (2009) study on the impact of physical investment and human development investment on economic growth in East Java, it found that government spending both in education and health has a significant effect on economic growth.

In the last five years, the economic growth of Java has fluctuated, while HDI shows an upward trend. The rise and decline of economic growth in Java during the past five years can be influenced by government expenditure on education and health, Human Development Index and labor force who worked. In this study, government expenditure on health and education sectors, Human Development Index and labor force who worked as independent variables that are expected to affect economic growth in Java period of 2010-2016. Here is the framework for this research:



**Figure 2.2 Research Framework**

#### **D. Hypothesis**

The hypothesis is a temporary answer to the formulation of research problems for new answers given based on the relevant theories and has not been based on empirical facts obtained through data collection. The hypothesis can also be seen as the conclusion that is very temporary. Hypothesis proposed in this research are:

1. The first hypothesis is regarding the effect of investment in health, the variable used as a representative of investment in health is the government expenditure on health. The health government expenditure is expected to enhance the development of human capital. Thus, health government expenditure is expected to have a positive and significant effect toward economic growth.

2. The second hypothesis is about the effect of investment in education toward economic growth. The variable used as a representative of investment in education is government expenditure on education. The education government expenditure is expected to have a positive impact on economic growth.
3. The third hypothesis examines the effect of HDI (Human Development Index) that is expected to have a positive effect toward economic growth. The higher a country can build the quality of human life or the population, then it will propel the country's economic growth.
4. The fourth hypothesis is the effect of working labor force toward economic growth. Increasing the number of working labor force is estimated that unemployment will decrease then helping to boost economic growth. Thus, working labor force is expected to have a positive impact on economic growth.