

## CHAPTER II

### REVIEW OF RELATED LITERATURE

#### 2.1. Literature Review

In finding the variables, analysis, and territory in this research, it is necessary referring to previous researches that discussed Gross Regional Domestic Product (GRDP) for measuring economic performance as below:

Odit, et al. (2010) explained that human capital plays an important role in economic or GDP growth mainly as an engine for improvement of the output level. In addition, this theory supported by Liu, et al. (2018) which found that Fixed-asset investment, human capital has played a more important role in the Gross domestic product (GDP). While governance quality only could bring high-speed economic growth effect in the western region and high-quality economic development effect in the eastern region.

Pambudi and Misyanto (2013) said that one of the factors that can affect growth of economy is investment. Investment is the first step in activities production and be a factor for increasing growth the economy. Thus, investing in essence is also the first step in economic development activities. subsequently in their research found that The only investment and work-force have a positive effect and significant to influence the economic or GRDP growth, while human capital variable has insignificant positive and agglomeration have insignificant negative toward economic growth. In addition, the significance influence of investement on GRDP also supported by Nasab and aghae (2009) and Karlita and Yusuf (2013) .

Maisaroh and Risyanto (2018) explained that besides investment, as a benchmark for the growth of a regional economy, it also cannot be separated from the role of government spending in the public service sector, it proven by the findings of his research which states Investment, government expenditure and worker was a positive and significant impact on the gross regional domestic product (GRDP) in Banten Province. Wardana, et al. (2014) concluded in their research that investment, government expenditures, exports have a positive effect on Economic Growth, only export variables that have a partial effect on Economic Growth. Moreover, a research conducted by Syahputra (2017) shows a positive significance by export, tax revenue and exchange rate towards the gross domestic product (GDP).

While different findings about government spending is expressed by Rabnawaz, et al. (2015) There is a positive relationship between GDP and revenue in public investment in the short run. Reversely, in the long run, revenue of public investment could decrease in GDP. Moreover, Fitri (2016) which said in the short term, government consumption, private investment, and human capital are not significant in influencing gross domestic product (GDP) in Indonesia. Meanwhile, in the long run, government consumption has a positive and significant impact on gross domestic product (GDP) in Indonesia. Whereas private investment and human capital have a negative and significant influence.

Maharani (2016) stated that worker is seen as a capable factor of production to increase factor usability other production (tillage, utilizing capital, etc.) so the company views the labor as an investment and a lot the company that delivers education to its employees as a form of capitalization of worker. which results from

his theory is also supported by Sitindaon (2013) which found that population growth, has a significant negative and significant positive effect on the workforce on economic growth. Regarding the population Klasen, et al. (2007) conducted a research in Uganda and found the contrary that both theoretical and empirical evidence founded that high population growth puts a considerable break on per capita Economic growth in Uganda.

Hence, it can be concluded that in broad outline the variables that have a significant influence on regional income are the following: investment both private and government, human capital, government consumption, tax revenue, labor force, government expenditure, exports, population and exchange rate. Apart from all, there are some researchers who find research results quite far from theory, such as Huda (2006) conducted research focused on Exchanges, Inflation, and SBI rates of Indonesia in the period 1999-2006 (1st quarter). Data analysis used panel data where FEM was the best model to explain the results of regression. Clearly, the regression show that only one variable, that is Securities of Indonesian Bank (SBI), influencing economics growth. In addition, Research conducted by Ervani (2008). The economic growth was a dependent variable and the independent variables were real investment, human capital, and rate deposit. The sample in this study used time series data and the results of this study indicate that in the short-term, Indonesia economic growth was not significantly affected by investment. While real investment, HDI, and rate deposit will affect economic growth in long-term.

In this study, researchers used time-series data and cross-section data that were different from previous researchers using panel data analysis. Moreover, the scope of this study was wider, namely the Indonesian country with 34 provinces

data, with the hopes were not only useful and could be used by domestic researchers but also foreign researchers. Nevertheless, the results of the study is possible to be different with existing theories, because the target of economic development is not only oriented to increasing income but is more focused on the quality of the local financial management process. Additionally, Hasan, et al. (2013) found the opposite of economic theory that the increase in West Sumatra investment in the period 2006-2010 was not accompanied by an increase in the growth of Gross Regional Domestic Product (GRDP) based on Constant Prices. In fact, basically, economic growth depends on the size, spending capacity, and effectiveness of the use of capital expenditure in the development process.

## **2.2. Theoretical Background**

Economic growth is the growth of goods and services characterized by an increase in the income of a region compared to a certain year. Therefore, economic growth shows the extent to which economic activity can run and generate income and prosperity in society, in economic analysis economic growth is very commonly used in determining the success of a country or region in the same economic sector as well as others. The theory of economic growth can differ from one generation to another and one economist to another economist. According to the classical economist, Adam Smith in (Lanza, 2012) said that economic growth was influenced by three factors, namely capital availability, population growth and the competitiveness of free trade in the market. While other classical economists such as David Ricardo who stated economic growth went hand in hand with capital accumulation and increased labor demand, the population would always gain the

introduction of machinery and technology improvement. He thought that with population growth, less productive land must be exploited, wages would rise, and mechanization would be attractive to increase productivity. As for one neo-classical generation, Robert Solow, who won the Nobel Prize in 1987, where a major paradigm is widely used in policymaking benchmark, his theory is also popular in explaining changes in the economy over time, which is also used to explain why national income grows in some countries faster than others. To achieve economic growth, Mankiw (2010) explained the aggregate terms of the Solow model can be divided into two namely:

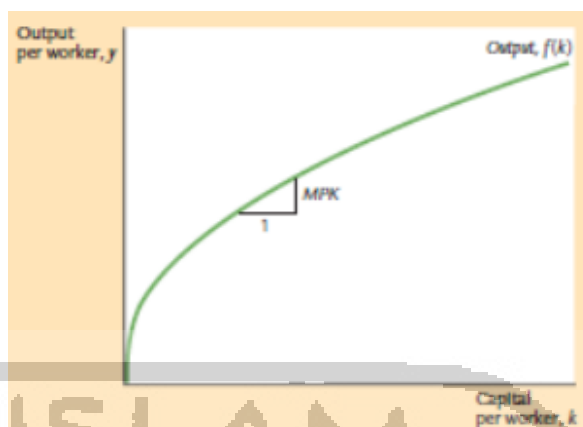
1. production or supply functions

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

2. Consumption or demand functions

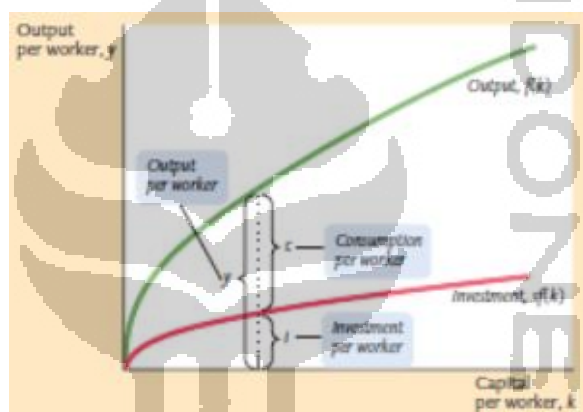
$$Y = C + I \dots\dots\dots (2.2)$$

Where the variable consists of capital (K), Labor (L), consumption (C), and investment (I), in this theory the production function has constant returns to scale. In addition, the relationship between variables is as follows:



Source: Mankiw, 2010

**Figure 2.1. : Production function**



Source: Mankiw, 2010

**Figure 2.2. : Consumption function**

The production function in Figure 2.1. shows how the amount of capital per worker ( $k$ ) determines the output per worker ( $y$ ), when the number of workers ( $k$ ) increases then the output ( $f(k)$ ) will also increase simultaneously. Although the impact of output can vary, the differences shown by the production function's slope where if  $k$  rises by one unit  $f(k)$  will rise following the MPK unit. As the slope becomes flatter, the impact can change, indicating diminishing marginal product capital. Since the consumption function in Figure 2.2. shows the saving position ( $s$ ) largely determines the allocation of output between consumption and

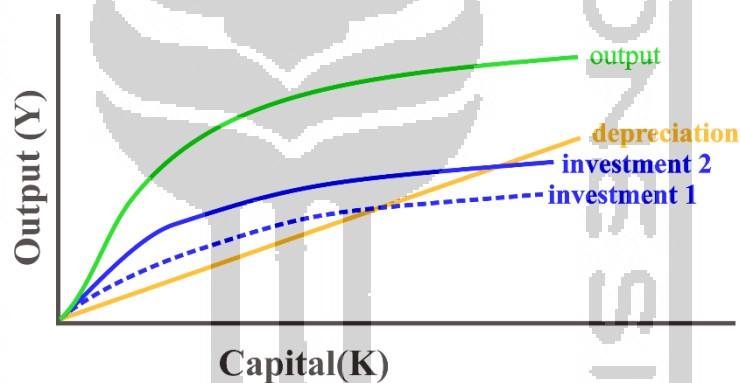
investment. Every level of capital ( $k$ ) consumption is output minus investment or in the formula  $f(k) - sf(k)$ . Somehow, we can express the impact of investment and depreciation on the capital stock is Change in Capital Stock = Investment - Depreciation or the formulation as below:

$$\Delta k = i - \delta k \dots\dots\dots (2.3)$$

As explained earlier, investment is  $sf(k)$ , hence it can be derived as below:

$$\Delta k = sf(k) - \delta k \dots\dots\dots (2.4)$$

Graphically all relationships between all variables can be described as follows:



Source: Mankiw, 2010, processed

**Figure 2.3. : Steady-State Level of Output**

Because diminishing returns is exist, the increase in investment will be followed by an increase in depreciation. Hence, when investment is higher than depreciation, the capital stock must be growing on line (c) to the point of intersection (a). In short, the steady-state level of output (d) is achieved where investment equal depreciation. However, the investment line can change if the saving rate increases, so investment changes from "investment1" to "investment2" which indirectly increases the steady-state from point (d) to (e).

Thus, we can find the answer why some countries can have higher economic growth compared to others. It is because they already in a position close to the steady-state level of output or so-called "cutting edge growth", where the economy will slow down due to the smaller investment and depreciation differences. No doubt why Germany and Japan have higher income growth rates than countries that are already in the cutting edge position such as America and France. (O'sullivan & Sheffrin, 2003) in his book "Economics: Principles in action" says that GDP is one of the main indicators used to measure the economic health of a country to date is the best measure to measure the value of output produced in one country as a basis for measuring economic growth. Hence, in this thesis the author is using GRDP value to be dependent variable of economic growth. Besides, government expenditure, worker, HDI and investment as independent variable.

### **2.2.1 Gross Regional Domestic Product (GRDP)**

Gross Regional Domestic Product (GRDP) is the amount of value-added of goods and services produced from all economic activities in a region. Bank Indonesia said in the metadata that the Gross Regional Domestic Product (GRDP) is one of the important indicators to determine the economic conditions in an area in a given period, both on the basis of current prices and on the basis of constant prices in calculating the Gross Regional Domestic Product (GRDP). There are three types of approaches, namely: the production approach, the expenditure approach and the income approach.



## 1. Production Approach

Production approach is the total value added of goods and services produced by various production units in the region of a region within a certain period (usually one year). The production units in this presentation are grouped into 9 business sectors, namely:

- a. Agriculture, animal husbandry, forestry and fisheries;
- b. Mining and excavation;
- c. Processing industry;
- d. Electricity, gas and clean water;
- e. Construction;
- f. Hotel and restaurant;
- g. Transportation and communication;
- h. Finance, real estate and business services;
- i. Services.

The formulation can be explained as below:

$$\text{GRDP} = (\text{P1X Q1}) + (\text{P2X Q2}) + \dots (\text{PnX Qn}) \dots \dots \dots (2.5)$$

Where:

P1 = price of 1st item

Pn = price of nth item

Q1 = 1st item type

Qn = nth item type

## 2. Expenditure Approach

Expenditure approach is calculated by adding up the final demand from economic actors in a country (consumers, producers, and government), which the formulation and components as follows:

$$\text{GRDP} = C + G + I + (X-M) \dots\dots\dots (2.6)$$

Where:

C = Household consumption expenditures and non-profit private institutions

G = government consumption;

I = gross domestic fixed capital formation; changes in inventory and;

X = export and M = Import

## 3. Revenue Approach

Revenue Approach is the amount of remuneration received by the factors of production participating in the production process in a region within a certain period of time. The formulation can be written as follows:

$$\text{GRDP} = r + w + i + p \dots\dots\dots (2.7)$$

Where:

r = income from wages, salaries, and others

w = Net income from land rent

i = income from capital interest

p = income from profits of companies and individual businesses

All GRDP approaches are calculated before the deduction of income tax and other direct taxes. In this definition, the Gross Regional Domestic Product (GRDP) includes depreciation and net indirect taxes (indirect taxes - subsidies). For the moment GRDP data published by BPS used two approaches, namely: first, production by collecting data from relevant departments or agencies. Second, expenditures by collecting relevant departments that officially issue data (such as export-import, government spending and investment, and private investment) and through special surveys (such as special surveys on household expenditure).

Gross Regional Domestic Product (GRDP) is conducted with 2 types of prices, namely: first, the basis of current prices (ADHB), which describes the value-added of goods and services calculated using prices in the current year. Second, the basis of constant prices (ADHK), which uses prevailing prices in one particular year as a base year. In order to know economic growth, then what used is constant prices because ADHK explains real economic growth from year to year or economic growth that is not influenced by inflation price factors, so the results of the influence of independent variables on Gross Regional Domestic Product (GRDP) show more accurate results.

### **2.2.2 Government expenditure**

Government expenditure is routine expenditure to finance development activities, such as paying the salaries of government employees, the education system and public health, various types of important infrastructure, and development are other important fields that will be funded by the government.

These expenditures will increase aggregate expenditure and increase the level of state economic activity (Sukirno, 2006). In general, it can be concluded that the optimal and efficient utilization of government spending will increase the economy and vice versa.

Government expenditure reflects government policy, this expenditure can be caused by macro and micro factors. Micro factors; for instance, the government has established a policy to buy goods and services, then the government expenditure budget will be used to finance these goods and services so that the policy is implemented. Whereas the macro factor is as explained by Rostow (1961) which has a concept with 3 stages of expenditure, namely:

1. The government must provide various facilities and infrastructure, such as health, education, and so on. At present, the percentage of government expenditure on national income is relatively large.
2. The role of government investment is still needed but private investment is getting bigger. Consequently, when the role of the private sector is increasingly large, the government must provide more and better public goods and services.
3. Government activities shift from providing infrastructure to social activities such as welfare programs in old age, public health services and so on.

### 2.2.3 Human Development Index (HDI)

Human Development Index (HDI) is actually talking about infrastructure quality of human beings, which includes three things, namely the health aspect, the educational aspect, and the mobility aspect. Human Development Index (HDI) indicator explains how residents can access the results of development in obtaining income, health, education, and so on, through methods that include:

- 1) Long life and a healthy life
- 2) Knowledge
- 3) A decent standard of living

HDI was introduced by one of the institutions of the United Nations in 1990 and was published regularly in the annual Human Development Report (HDR) report. UNDP ranks all countries from a scale of 0 (lowest) to 1 (highest) in terms of human development in that country. The formula used is as follows:

#### 1. Health Dimension

$$I_{Health} = \frac{life\ expectation - life\ expectataion_{min}}{life\ expectataion_{max} - life\ expectataion_{min}} \dots\dots\dots(2.8)$$

#### 2. Education Dimension

$$I_{expected\ length\ of\ school} = \frac{ELS + ELS_{min}}{ELS_{max} - ELS_{min}} \dots\dots\dots(2.9)$$

$$I_{mean\ length\ of\ school} = \frac{MLS + MLS_{min}}{MLS_{max} - MLS_{min}} \dots\dots\dots(2.10)$$

$$I_{education} = \frac{I_{expected\ length\ of\ school} + I_{mean\ length\ of\ school}}{2} \dots\dots\dots(2.11)$$

### 3. Expenditure Dimension

$$I_{\text{expenditure}} = \frac{\ln(\text{expenditure}) - \ln(\text{expenditure})_{\min}}{\ln(\text{expenditure})_{\max} - \ln(\text{expenditure})_{\min}} \dots\dots\dots (2.12)$$

### 4. Calculating HDI

$$HDI = \sqrt[3]{I_{\text{Health}} \times I_{\text{Education}} \times I_{\text{Expenditure}}} \times 100 \dots\dots\dots (2.13)$$

According to Alevriadou & Giaouri (2016) Human Capital in the form of education, health, and motivation are determinants of social and individual development; especially in increasing competition and a global economy laden with scientific progress. In addition, Sukirno (2006) explained that education is an investment that is very useful for economic development. Individuals who get higher education tend to get higher incomes compared to uneducated. The higher the education, the higher the income is earned. The level of health is positively correlated to economic growth because by maintaining good health, work productivity will be high so that it can get higher wages or payments so that it can meet the needs of life and can spur rapid economic growth.

#### 2.2.4 Worker

According to Law No. 13 of 2003 Chapter 1 article 1 paragraph 2 stated that Worker is anyone who is able to do work to produce goods or services both to meet their own needs and for the community, also quoted from BPS that the definition of worker is a person (between 15-65 years old) who worked for pay or assisted others in obtaining pay or profit for the duration at least one hour during the survey week. Include an unpaid worker who help an economically activity/ business, while labor in general is considered to have a permanent employer. The population has an

important role in economic development, both from the demand side and the supply side. When viewed from the demand side, residents act as consumers while viewed from the supply side, residents as owners of labor production factors. Linkages investment with labor is to increase employment. With the higher people will invest their capital then employment will be more widespread or high. Because they invest by building businesses that can absorb labor.

However, not all residents entering this age are called worker. Because residents who are not active in economic activities are not included in the worker group, such as housewives, students, and students, and income earners (retirees). Therefore, in this study the authors use the workforce that works as independent data because their contribution is very significant to the regional income of the country or region concerned.

#### **2.2.5 Investment**

Investment in Indonesia can be done by the government or private sector. It consists of two kinds, namely: Domestic Direct Investment (DDI), and Foreign Direct Investment (FDI). Investment can be interpreted as an expenditure or expenditure for investors or companies to buy capital goods and production equipment to increase the ability to produce goods and services in the economy. Investment is not only to maximize output but to determine the distribution of labor and income distribution, population growth and quality and technology (Sukirno, 2006).

Mankiw (2010) argues that investment consists of goods which purchased for future use. Investments can be differentiated in three types of business fixed

investment, residential investment, and inventory investment. Business fixed investment includes equipment and facilities used by companies in the production process, while residential investment includes the purchase of new homes, both of which will be occupied by the owner himself or himself which will be leased back, while inventory investment is a good stored by companies in warehouses covering raw materials, inventory of goods semi-finished and finished goods.

### **2.3. The Relationship between Dependent Variable and Independent Variable**

The main purpose of government expenditure is to bring prosperity to the community through various programs that have been made. The higher the distribution means the greater or more programs that have been carried out by the government, so that economic facilities and infrastructure in the community can be fulfilled and can increase government revenue in an area.

Human development index which defines the quality of human capital is one of the unique factors of production, requiring more serious attention from all parties. Education and health have an effective carrying capacity for regional income. Education is used to create an educated, trained, and health literate workforce that is needed to achieve a decent life. Besides that, the education of a person with his health can increase the productivity and quality of his work, which will increase his income. An increase in income will increase the income and standard of living of the community, which in turn will affect the national income of the country concerned.

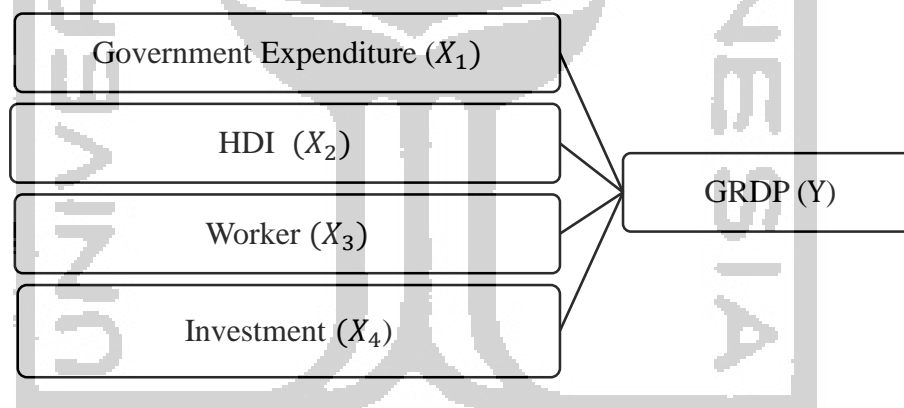
Worker shows the level of production and public welfare, a country with a larger number of Workers mean they automatically have money for their daily



needs, so they will spend their money in various economic sectors. Indirectly will encourage producers to produce goods or services that consumers demand, so that this economic circulation went smoothly indicates Gross Regional Domestic Product (GRDP) in a region will increase.

Investment is one important factor in increasing production. Without investment, the production process will not run smoothly resulting in a decrease in overall output. The investment will open many new companies and even enlarge existing companies so that production capacity and output increases both regional and national.

#### 2.4. Thinking framework



#### 2.5. Hypothesis

Based on relevant theories and concepts, as well as earlier research results on Government expenditure, Human Development Index (HDI), Worker, and Investment impacts on Gross Regional Domestic Product (GRDP), a temporary answer can be given to the existing problems. The hypothesis in this research are:

1. The size of government expenditure significantly and positively influences Indonesia's provincial Gross Regional Domestic Product (GRDP).
2. Human Development Index (HDI) significantly and positively influences Indonesia's provincial Gross Regional Domestic Product (GRDP).
3. The number of worker significantly and positively influences Indonesia's provincial Gross Regional Domestic Product (GRDP).
4. The volume of Investment significantly and positively influences Indonesia's provincial Gross Regional Domestic Product (GRDP).

