CHAPTER II

LITERATURE REVIEW

A. Theoretical Framework

1. Inflation

According to Mankiw(2009), Inflation is an increase in the overall general price level of goods and services in the economy over a period of time, which constantly makes the purchasing power of the domestic currency is falling. However, inflation is not an easy thing to explained and control because this instrument of policy is potentially so powerful that can impact the economic conditions such as the society will face a short-run tradeoff between inflation and unemployment.

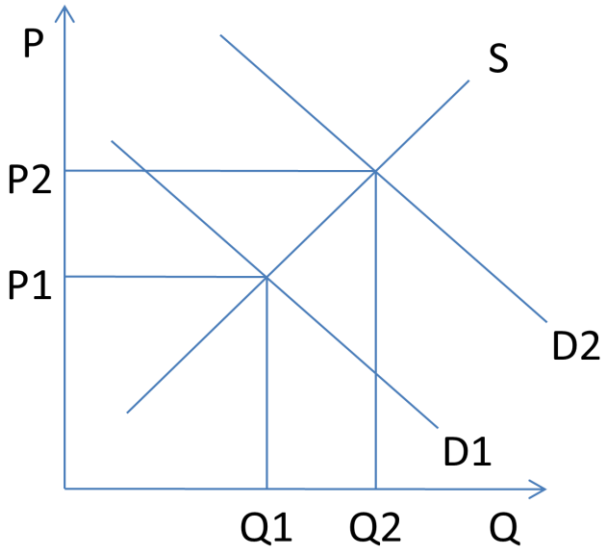
Based on Law No. 3 of 2004, concerned in the effectiveness of monetary policy to achieve and maintain the stable value of rupiah rate, which the stability is shown through inflation rate and the exchange rate, the central bank of Indonesia called Bank Indonesia implemented an inflation targeting framework in order to keep the economy running smoothly.

a) Based on the severity, inflation is divided into several categories:
    1) Creeping inflation, where the inflation is less than 10% per year.
    2) Galloping inflation, where the inflation rate is between 10-30% per year.

3) High inflation, where the inflation rate is between 30-100% per year.
4) Hyperinflation, where the inflation rate is over 100% per year.

b) Based on the caused, the rising and falling inflation is caused by two factors:
   1) Demand -Pull inflation.

      Demand-pull inflation is inflation caused by the pull of demand or the rises in the aggregate demand for goods and that demand for expenditure is much bigger than the economy ability. This condition occurs when the production is in a state of full employment and inflation stems from their aggregate demand. In these circumstances, the increase in total demand will lead to the raising of prices may also increase production or output due to the rise of demand. If full employment can achievethe addition of the next demand then it will increase the price alone only. if the demand affecting the equilibrium of GNP at full employment then it will cause an "inflationary gap". An inflationary gap is what can cause inflation.



Source: Karl E. Case, Ray C. Fair (2016)

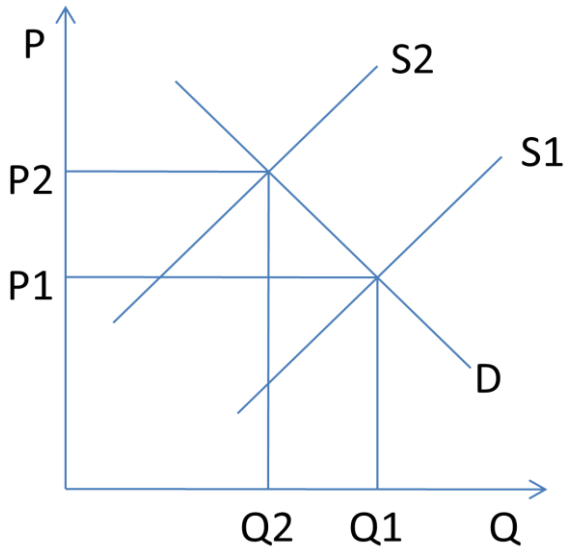
Figure 2-1 Demand-Pull Inflation

From the curve above shows that with the increase in demand side from D1 to D2 would affect the price level to move from P1 to P2. In conclusion the overload on the demand side which the producers cannot full fill would affect the price to increase because the demand is bigger than the supply side.

For example, in 2006 the average price of Baltimore newspaper was 0.50 US dollar and in 2007 become 0.75 US dollar due to the increased regard for newspapers shift the demand curve to the right with upward-sloping supply this would make the price to increase (Karl E. Case, Ray C. Fair, 2016).

2) Cost-Push Inflation

Cost-push inflation is inflation due to the rise in production costs. The increase in costs production itself can be caused by several factors, including as a result of exchange rate fluctuation, international trading, government administration price, shocks in the supply side due to natural disasters and disruption of distribution by the central bank, monopolistic industry, and demand on increasing wage by unity trade unions.



Source: Karl E. Case, Ray C. Fair (2016)

Figure 2-2 Cost-Push Inflation

From the curve above shows that the increase on the cost of production would move the supply curve and the axis of quantity to the left side while the demand remains the same eventually lead to the increase of price level. For

example in 2006 the price of Baltimore newspapers was 0.50 US Dollar and in 2007 the price is rising up to 0.75 US dollar due to the higher cost of production such as the price of ink, paper, and distribution, this condition shift the supply curve to the left and with downward-sloping curve of demand the price of Baltimore newspapers eventually rise (Karl E. Case, Ray C. Fair, 2016).

c) Based on the origin of occurrence, inflation is divided into two:

1) Domestic Inflation.

Domestic inflation is usually caused by domestic causes, such as the printing of money to cover the deficit of government expenditure.

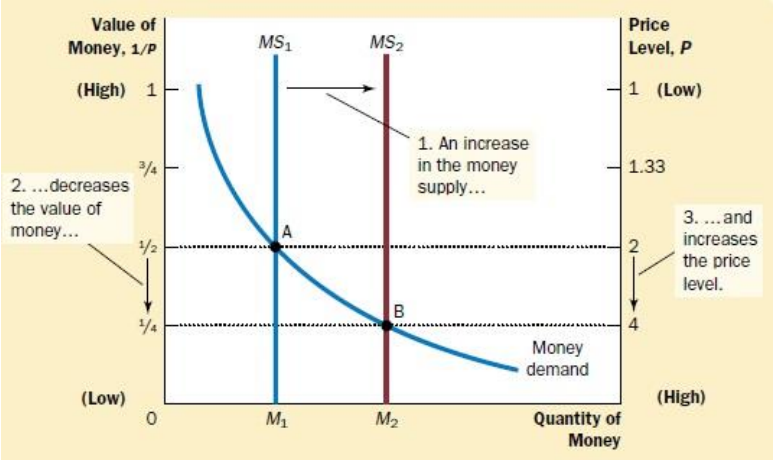
2) Imported Inflation.

Imported inflation occurred because there is any international trade. If a country experiences inflation, this inflation can spread to other countries that have trade relations with them caused by their production of goods and services certainly will be sold more expensive.

d) There is three theories on inflation:

1) The Quantity Theory (Theory of Monetarist).

The debate between monetarist and Keynesian theory is complicated because they meant different things to different people. However, Monetarism usually considered going beyond the nation that money matters or in conclusion this theory explained that inflation is caused by the increase of money supply. The higher money supply will cause higher inflation. Therefore the government has to calculate the inflation if they going to print money because printing too much money will cause an economic shock. Suppose the citizen predict the price of goods will increase and they tend to not save their money to buy goods before the price increase will lead to inflation also, but in this theory, the only way to solve the problem of inflation is with decreasing the money supply. As long as the government can manage the money supply than inflation also can be controlled.



Source: Mankiw(2011)

Figure 2-3 Increase in the Money Supply

Based on the graph above, it is simply shown that the price level or the inflation rate would only change if the money supply and the money demand are on the imbalance conditions. Suppose the money supply is higher than the money demand would impact the rise in price level which leads to inflation. If the money supply is much lower than the money demand would impact to lower the price level which leads to deflation.

In Utari, S and Pambudi(2015) book, The theory quantity of money based on Fisher formulas are:

$$M\,V = P\,Y$$

$$\frac{\Delta Ms}{\mathrm{Ms}} + \frac{\Delta V}{\mathrm{V}} = \frac{\Delta P}{\mathrm{P}} + \frac{\Delta Y}{Y}$$

$$\frac{\Delta P}{\mathrm{P}} = \frac{\Delta Ms}{\mathrm{Ms}} + \frac{\Delta V}{\mathrm{V}} - \frac{\Delta Y}{\mathrm{Y}}$$

Where is :

$\frac{\Delta P}{\mathrm{P}}$ = Inflation rate.

$\frac{\Delta Ms}{\mathrm{Ms}}$ = Growth of Money Supply.

$\frac{\Delta V}{\mathrm{V}}$ = Percentage of the velocity.

$\frac{\Delta Y}{\mathrm{Y}}$ = The output growth.

Based on this theory can be concluded that the velocity of money is relatively stable or constant over the period. If the economic condition is assumed at full employment status which leads to $\frac{\Delta Y}{\mathrm{Y}}$ is equal zero. Then the inflation is known caused by the growth of money supply $\frac{\Delta P}{\mathrm{P}} = \frac{\Delta Ms}{\mathrm{Ms}}$

2) Keynesian Theory

Based on this theory, inflation appears because the aggregate demand is higher than the aggregate supply in full employment conditions (over the potential output). Such as, when the society wants to live the way more than what they can earn, this kind of situation generally leads to the inflation caused by the increase of great aggregate demand without followed by the supply. Another example based on Keynesian which can affect the price level is

household consumption expenditure, investment expenditure, government expenditure, and tax.

The difference between monetarist approach and Keynesian approach is that in the monetarist the quantity of money supply is the only variable which caused the inflation, wherein the Keynesian approach the excess increase in total expenditure such as investment expenditure and government expenditure is the cause of excess in the total demand which leads to the inflation.

3) The Structural Theory

The structural theory or long-run theory of inflation is to focus on economic structure especially supply on foods and exports. The unbalanced of goods productions and its demand lead to the increase in price and decrease on reserve asset. The other economic structure that caused inflation is the increase of general price in the market, in this theory such a kind of problem cannot be solved with controlling the money supply only but also have to through increasing in the productivity and develop the food and export sectors.

In conclusion, on this theory, the economist try to solve the problems of unbalanced economy based on the

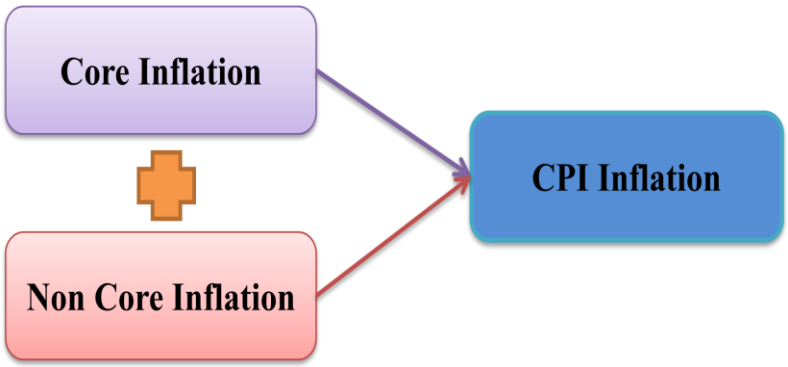
structured caused, through monetary and fiscal approach. The unbalanced of economic conditions could be from domestics shocks (harvest failure, natural disaster) or anything related to international trade (worsening in the term of trade, production rigidity, foreign debt, and the condition of the exchange rate) which can lead to the price fluctuation in the domestic market.

According to Dornbusch and Fisher(2008),the impact of inflation on the economy is that inflation increase the high cost of holding currency lead on the decrease of demand for the currency, suppose this condition influencing the great mass of wealth redistribution between existing sectors such as from the private sector to the household sector then it will lead to another economic problem which is the increase in the number of poverty caused by the unemployment phenomenon, and increasing the real value of tax payments. In general, inflation had positive and negative effects depend on whether severe or not the inflation is. According to most economists if the inflation is mild then it has a positive influence to stimulate the economy by make people excited to work that can rise the national income. But it can be chaotic in the severe inflation or usually called by hyperinflation in this condition people

are not excited about working, saving and production because prices are rising rapidly and hard to bear.

e) Component of Inflation:

Basically, inflation can be divided into two categories based on the cause of the occurrence. First is the Core inflation, and second is the Noncore inflation as displayed in the graph below.



Source: Utari et al (2015)

Figure 2-4DisagregationInflasi

The core inflation or also called the underlying inflation is a measure of inflation that excludes certain items that have volatile price movements (fluctuate widely) on any given day which commonly cause shocks, such as volatile foods and administered prices from its considerations. The component of core inflation tends to persist in the inflation movement and influenced by the fundamental factors such as demand and supply, external factors

(exchange rates, international commodity prices, imported inflation), and expected inflation. This kind of inflation is inflation which has functioned as an operational target because it's can be influenced or controlled by the central bank. Some of the ways of central bank manage inflation is by manipulating the money supply and interest rates. Suppose the core inflation exceeds the target rate, then, the central bank may rise the interest rate to slow it down.

On the other hand, the noncore inflation or also called as the noises inflation is inflation which has volatility quite high because it is influenced by non fundamental factors on short periods and out of the monetary authorities control. The noncore inflation can be divided into two categories. The first is the volatile foods, where the inflation is dominant by the shocks in the foodstuffs group such as the price of crops, harvest disruption from natural disaster, and the development of domestic and international food commodity prices. The second is the administered prices, where the inflation is dominant by the shocks in the government price policy such as the price of petrol, and energy prices. Therefore inflation can be disaggregated into core inflation, volatile foods, and administered price.

2. Money Supply

Money supply is the quantity of money available in an economy. In an economy that uses fiat money, the government controls the money supply through a monetary policy with controlling the quantity of money printing, level of taxation, and the level of government purchases. In the United States the central bank called Federal Reserve shortened as Fed controls the money supply using monetary policy through decisions made by Fed's Federal Open Market Committee, the open market operations are selling or purchasing the government's bond to control the money supply. The works is if the government want to increase the money supply usually central bank would buy some government bonds from the public, with purchasing bonds from the public would increase the quantity of money in circulation, suppose the government want to decrease the money supply then central bank would sell some government bonds from its own portfolio. Changes in the quantity of money (*M*) when the velocity (*V*) is fixed will change the nominal of GDP (*PY*), with formula $\boldsymbol{M\bar{V} = PY}$, therefore the quantity of money somehow can determine the national economy.

Money supply divided into two categories based on the classification. The first is M1 which includes traveler's checks, currency plus demand deposits, and other checkable deposits. M1 is generally more limited and liquid or easy to convert to physical currency. The second is M2 which is consists of M1 plus mutual fund balances, retail money

market, saving deposits (including money market deposits accounts), and short time deposit or can be written with formula $M2 = \mathrm{M0} + \mathrm{M1}$ where M2 usually is less liquid and not easy to convert to physical money than M1. Even though M2 is never really used as payment but it often serve as a legitimate way to invest, increase wealth, pay bills, and taxes (Mankiw, 2009).

3. Exchange rates

There is any two component of exchange rates based on N. Gregory Mankiw(2011), the first is nominal exchange rate where the rate of a person can trade their currency to another currency from different country, the second is the real exchange rate, is where the rate of a person can trade a goods and services of one country to goods and services to another country. The relation between them is that the real exchange rate actually depends on the nominal exchange rate including the price of goods and services in both countries measured in the local currencies.

$$\boldsymbol{RealExchangerate} = \frac{\boldsymbol{Nominalexchangerate} \times \boldsymbol{Domesticprice}}{\boldsymbol{ForeignPrice}}$$

Based on Ito (2007), some of East Asia such as Korea, Thailand, Indonesia, and the Philippines are adopted an Inflation Targeting system around 1998, and some of them are have not necessarily given up on

intervention in the foreign exchange market to control the exchange rates volatility. The exchange rate actually is concluded in one of the shocks which influence the economy. The shock is mayor may not jeopardize the inflation targeting, or even it may contribute to stabilize the prices. When the domestic currency value on the exchange rate is relatively high, it tends to lower the inflation rate by lowering the cost of imports, discouraging exports, and lowering the interest rate to stimulate the economy, unless the inflation rate is too high, to begin with. However, during the crises around 1997-1998, the inflation is brought down very quickly. Around 2000 until 2006 when the conditions are much more stable, the fact the importance of the exchange rates in forecasting the inflation rate is explained on the study that has been conducted the study shows that there is any correlation between the movement of the exchange rate and the inflation rate. Depreciation of the Rupiah values is associated with higher inflation or vice versa.

On the other case, a fall in the currency value also might be indicate that the country is on an expansionary monetary policy which can be used as a counter-cyclical measure to stimulate profits, output, demand, and jobs when their economic condition is in slowdown or recession. The policy expected to bring an improvement in the balance of trade by making the export sales become higher (supply-chain effect). In conclusion that the fall of domestic currency on exchange rate also could provide a competitive boost to an economy, and can lead to positive

multiplier and accelerator effect within the circular flow of income and spending. This phenomenon is already proved by economists at Goldman Sachs t that one percent fall in the domestic currency value will give the same result on the output of economy by 0.2 percent.

4. Interest rate

There are any two categories of interest rate, the first is the nominal interest rate which is published or quoted interest rate on a financial asset. The second is the real interest rate which is a return to the investor measured in terms of its actual purchasing power. The interest rate in Indonesia is controlled by the central bank called Bank Indonesia, shortened BI. The rate is announced by the Board of Governors of Bank Indonesia monthly and implemented in the operation of monetary policy as an effort to achieve the operational and economic stability.

Since Bank Indonesia officially implemented Inflation Targeting Framework (ITF) in full on July 2005 they change its operational final target monetary policy from amount of money (base money / M0) which is known as inflation targeting framework lite to the full-fledged inflation targeting framework with the announcement of interest rate (the BI Rate) in monthly basis as a target operational with the power through monetary policy that the central bank has. Since 2003, the change of interest rate becomes more dominant than money supply in the monetary stability, especially the interest rate that formed at each SBI auction is carried out

(the determination of discount rate). The central bank declares that the rise in the interest rate could suppress public and government spending so as to reduce the overall demand which ultimately decreases the inflation, on the other hand, interest rates also could strengthen the exchange rates through positive interest rate differential (M, Guruh and R, 2008).

Looking at the quantity theory of money which determines the inflation, where is if the money supply is growing the prices tend to rises, the conditions of interest rate when its low will increase the money supply because individuals and businesses tend to demand more loans (money to spend) resulting the economy to grow and inflation to increase. When the conditions of interest rate are high, consumers tend to save their money more decreasing the circulation of money in the society which leads to the economic conditions to slow down and the inflation rate to decrease.

5. Gross Domestics Product

Gross domestics product is the total market value of all final goods and services or output produced within a given period of time by factors of production located within a country. GDP can be computed in two ways, one is the expenditure approach where the total amount spent on all final goods and services or consumption together with investment, government expenditure, and net exports during a given period adds up, GDP= C+I+G+(EXP – IMP), and second is the income approach where the income, rent, interest, and profits received by all production factors in

producing final goods and services adds up, GDP = Rent + Wage + Interest+ Profit.

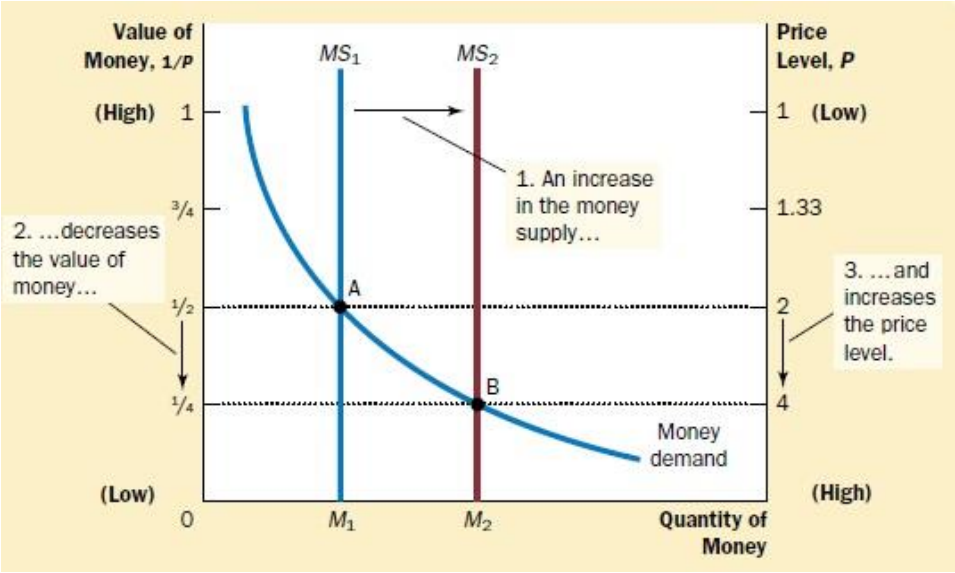
There are any two possibilities if gross domestics product which measures the total spending on services and goods in all markets in the economy rise either the economy produces a larger output of goods and services or they being sold at higher prices. In order to separate these two effects, economists use real gross domestics product rather than nominal gross domestics product. To gauge how well the performance of economy, economist use real gross domestics product which measures the overall production of goods and services that is not affected by changes in prices (valued at constant prices), it also can reflect the ability that satisfies people's needs and desire(N. Gregory Mankiw, 2011).

One of the variables that include in the domestics products calculation is consumption which based on the Keynesian theory of consumption when the incomes are increases then the people tend to spend more in their consumption. Increase in the consumption means increase in the demand side, an increase in the demand side if it is not followed by the supply side, because of the economy is in low output conditions or low GDP levels then the country relatively has a flat aggregate supply, then this conditions will increase the price level because of the scarcity of supply side, if this is happened in overall price level it can be a catastrophic of demand-pull inflation. However, the central bank will try to increase the output which letter likely has a small effect to the price

level. The policy called expansionary policy eventually will shift the aggregate demand to the right side, allowed the output to increase which calm down the price level and inflation rate (Karl E. Case, Ray C. Fair, 2016).

6. The correlation Between Money supply and Inflation

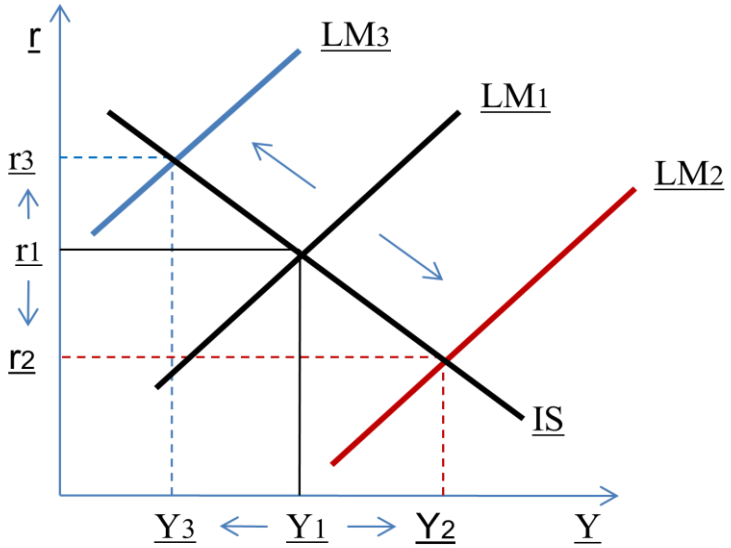
The relationships between money supply and inflation are has been explained above. Which is higher the money supply caused by either printing or buying a legitimate certificate or bonds from the public could lead to the inflation is supported in the theory monetarist or also called the quantity theory.



Source: Mankiw (2011)

Figure 2-5 Increase in the Money Supply

On the graph above shows that when the government increases the money supply from MS1 TO MS2, The value of money becomes lower, and the price level (on the right axis) is become higher, which means that each money becomes less valuable to buy goods and services. Short in the chase, based on the quantity theory, the growth rate in the quantity of money available in society determines the value of money, and the growth rate in the quantity is the cause of inflation (Mishkin and Eakins, 2003).



Source: Karl E. Case, Ray C. Fair (2016)

Figure 2-6 Liquidity of Money to the Economy

The curve above explained that the money supply can become a monetary tool to solve a certain conditions in the economy through its monetary policy. Suppose the economic condition of a nation is sluggish, then through the expansionary monetary policy with rise the money supply from LM1 to LM2 eventually will increase the income of society and

overcome the unemployment. On the other conditions, if the LM1 move to LM3 (the money supply in the society is overly high) caused by the overheated economy condition, the government should decrease the money supply through the contractionary monetary policy which can help to overcome inflation phenomenon with open market operations, increasing the minimum reserve requirement of the banks, increase the discount rate, intervention in the foreign exchange market, or overview the credit/financing and moral suasion regulations of the banks.

7. The correlation Between Exchange Rates and Inflation.

The central bank should pay attention to the exchange rates volatility forecasting the inflation rate in the future. The relationship between the exchange rates towards inflation is that any shock of depreciation on the value of exchange rates will affect the inflation directly through import price inflation and the rise of competitive exports eventually would put pressure to the inflationary on domestic prices. The depreciation of exchange rates also will rise the interest rate which is one of the variables that the central bank can control to intervene the foreign exchange market due to change the exchange rate movement which may have an effect on the inflation targeting. The depreciation on the value of exchange rates would be the opposite-raising the interest rate, this is because of the rise in the interest rate expected to offset the shock that tends to the inflation. On the other hand, the inflation shock is tends to

depreciate the exchange rate by making the domestic products less competitive (Ito, 2007)

8. The correlation Between Interest rate and Inflation.

The increase in interest rate could strengthen the value of domestic money, suppress consumer and government expenditure, leading to the decrease in demand in general which also decrease the inflation. The interest rate is used by the central bank as a tool (monetary policy) to influence the inflation rate, financial, and real sectors. On the inflation targeting framework as the final operational target, the interest rate is used as policy instrument through open market operation, minimum reserve requirement, and discount rate (M, Guruh and R, 2008).

On the other hand Utari, S and Pambudi(2015), speculate that low inflation is happen accompanied by low-interest rate, which driving the business world to invest in that country and increase the production activity which later will improve the economic growth. To strengthen the monetary policy, in the middle of 2005 inflation targeting framework is implemented as a final stability target which uses interest rate as monetary policy target operational.

9. The correlation Between Gross Domestic Product and Inflation.

The correlation between Gross Domestic Product and inflation is that gross domestic product it has a positive influence towards inflation.

On Keynesian theory declare that the rise in GDP on the consumption side would eventually increase the aggregate demand by the society. As it has been explained in the cause of demand-pull inflation, the increase of aggregate demand which not followed by the aggregate supply in overall goods and services would lead to inflation. However, it is very depends on the economic activity of the related country, because gross domestic product does not only reflected the consumption but also the investment, and the net exports.

B. Previous Research

Langi, Masinambow and Siwu (2014), in Jurnal Berkala Ilmiah Efisiensi with research title "Analisis Pengaruh Suku Bunga BI, Jumlah Uang Beredar, dan Tingkat Kurs Terhadap Tingkat Inflasi di Indonesia" use error correction model Engle-Granger, the results revealed that the changes of BI Rate as the Indonesian interest rate is positive and significant towards the changes of inflation. Meanwhile, even though the changes in money supply and exchange rates are also positive but they are not significantly affecting the rate of inflation in Indonesia.

Kalalo, Rostinsulu and Maramis (2016) in their research on "Analisis Faktor-Faktor Yang Mempengaruhi Inflasi Di Indonesia Periode 2000-2014" use ordinary least square. The conclusion of the research is that the variables of money supply, exchange rates, BI rate, and the world oil prices as a representative of administered prices simultaneously have a positive effect

towards the inflation. However, the only interest rate that has a significant effect on the change in inflation. Those variables together jointly can explained 56,1% of the changes that happen in inflation showed in the R-squared value, while the other 43,9% is influenced by other variables that are not included in the estimation model.

Saputra and SBM (2014),in their research about "Analisis Faktor-Faktor Yang Mempengaruhi Inflasi Di Indonesia 2007-2012" with a method used is an ARCH/GARCH model, the research conclusion revealed that the changes of inflation can be explained by variables money supply, exchange rates, interest rate, and rice prices as the representative of volatile foods. Whereas, the money supply, exchange rates, and rice prices are positive and significantly influenced to the inflation while the interest rate even tough positive but it is not significantly influenced the inflation.

Krisnaldy (2017), in his research on "Pengaruh Jumlah Uang Beredar, Produk Domestik Bruto, Kurs dan Tingkat Bunga Terhadap Inflasi di Indonesia Pendekatan Error Correction Model" shows that in short-term the only variable that has a significant influence towards inflation is exchange rate variable with a negative sign of relationship. However the researcher found out that there is any correction mechanism on inflation, suppose if the inflation rate is on the bellow of equilibrium than the inflation will be expansive due to the growth of Exchange rate, on the other way around, if the inflation rate is above the equilibrium on long-term then the inflation will be contractive to reach the equilibrium level.

Odusanya and Atanda (2010), they did a research on “Analysis of Inflation and its Determinants in Nigeria” the method used are the augmented Engle-Granger cointegration test and error correction mechanism model with results that the changes or growth of variable money supply should be continuously monitored since it gives a long-run potential and magnitude of the inflationary pressure on the economy with positive sign of relationship. The lower interest rate on lending, in this case, is important since the interest rate gives a resultant effect of investment crowd-out on the price level in the economy, or it also can be said that interest rate and inflation has a positive relationship. The growth of gross domestic product has a negative relationship and with a result from the test is significantly affecting the inflation. The exchange rate is found out to exert a negative influence on inflation. The government expenditure has to be well managed to prevent over-spending and over-estimation that lead to imbalances in price stability level in the economy.

Aghisna (2017),in her thesis research on “Analisis Faktor-Faktor Yang Mempengaruhi Inflasi di Indonesia Tahun 2000-2015” with method multiple linear regression is used in her research model. The results of her research are that the fuel and oil price subsidies, Exchange rate, and Interest rate have a positive and significant influence on the growth of inflation in Indonesia. However, variable GDP even tough has a significant influence also but it has a negative relationship towards the growth of inflation in Indonesia.

Munepapa and Sheefeni (2017),in their journal on “The Impact of Import on inflation in Namibia” which used an error correction model methods gave results that money supply, gross domestic product, lending rate, exchange rate, or in other words all variables excluding imports gives a significant influence to the inflation in the model. With relationship: the gross domestic product has a negative relationship, and money supply has a positive relationship towards inflation. Therefore in their research can be concluded that in short-run cases policymakers should focus on other variables consider imports is not that important in explaining short-run inflation.

Siregar and Rajaguru (2005),in their journal research on “Base Money and Exchange Rate: Sources of Inflation in Indonesia during the Post-1997 Financial Crisis” which used bunch of statistical method such as ARDL, GARCH, and ARCH gave conclusions based on the working monetary model that the key determinant of inflation during the post-crisis period are the volatility in the exchange rate and rapid growth of base money or money supply.

Suprihati (2017) in her research on “Analysis of Factors Affecting Inflation In Indonesia Period 2008-2016” with the method used is a multiple linear regression has a conclusion that variables money supply, interest rate, exchange rate, and the fuel and oil price can explain 69% of Inflation that happened in this model. All of the variables except money supply (M2) have a significant effect towards Inflation in Indonesia with further explanation:

the Interest Rate has a negative influence, the exchange rate has a positive influence, the fuel and oil price has a positive influence towards inflation.

Wulan and Nurfaiza (2014),in their research on “Analysis of Factors Affecting Inflation in Indonesia: an Islamic Perspective” with the method used is a multiple linear regression analysis has results that the interest rate has a negative trend, money supply has a positive trend, the exchange rate has a positive trend and are all significantly influence to the inflation.

Hartarto (2014) in his thesis research with title “Analisis Faktor-Faktor Yang Mempengaruhi Inflasi di Indonesia” using multiple linear regression methods had a conclusion that interest rate has a positive and significant influence towards inflation, while money supply even tough also has a positive influence but it is not significant. On the other hand, variable gross domestic product and exchange rate are had a negative relationship towards inflation, but both are not significant because every single point that increases in the independent variable is not accompanied by the increase of inflation variable.

Likukela (2007), in her thesis research with title “An Econometrics Analysis Of The Determinant Of Inflation In Namibia” use an Engle-Granger and error correction model has conclusion that the gross domestic product has a negative relationship towards inflation both in short-run and long-run analysis, therefore, she suggests that the government can reduce

inflation by increasing the total output especially in the sectors that they have potential growth such as agricultural output.

C. Hypothesis

Based on the theoretical framework, and previous research that has been described above, it can develop some hypothesis to answer the research question in temporary as follow:

1) The first hypothesis is regarding the effect of Money supply towards inflation, the variable used as a representative of the money supply is the M2. The money supply is expected to have a positive effect towards the growth of inflation.
2) The second hypothesis is related to the effect of Exchange rate towards inflation. The high nominal of exchange rates is a sign of a decrease in the value of domestic currency towards dollar, this phenomenon sometimes influences the economic performance and the inflation rate. Thus, the higher nominal exchange rate is expected to influence the inflation on the higher rate also or have a positive influence.
3) The third hypothesis is interest rate or also called as BI rate in Indonesia which expected to have a negative effect towards inflation. The higher amount of interest rate would decrease the amount of money that circulates in the society because they tend to prefer to save their money so does on the government spending

which reduces the demand side allowed the economy conditions to slow down will eventually also decrease the rate of inflation.

4) The fourth hypothesis is about the effect of Gross Domestic Product towards inflation. They are expected to have a positive relationship since as the Gross Domestic Product of consumption side increases could lead to inflation.

D. Research Framework

The goal of Bank Indonesia as implemented in the law UU No.23 of 1999 concerning Bank Indonesia and replaced with the law in article 7 of act No.3 of 2004 is to achieve and maintain the stability of rupiah which reflected in two directions: inflation rate and exchange rate. to achieve the goal, Bank Indonesia decided to change the inflation targeting lite which based on base money to the adoption of inflation targeting framework in full-fledged as the implementation of strategy in monetary policy begin with the announcement of interest rate called BI rate on July 2005 with the target of inflation is decided gradually and competitively for medium and long-run period at number 3%, where the control of the exchange rate is based on market mechanism through a free-floating exchange rate system.

In order to maintain the inflation in the within target range number is required factors that can affect the inflation rate such as money supply which believed theoretically in monetarist theory has a positive influence towards the growth of inflation. The explanation of the exchange rate from

some previous study also has a major role in the contribution of inflation rate through its significant level with a positive relationship. The interest rate is one of the variables that central bank used as a monetary policy to control the growth of inflation through its negative relationship. And lastly, the variable that reviewed on this research is gross domestic product that is believed has a positive influence towards inflation growth based on the Keynesian theory of consumption.

Inflation always fluctuates. The rise and decline of the inflation in Indonesia can be influenced by many aspects such as the growth of the money supply, exchange rate, BI rate, and gross domestic product during period the 2013-2017. However, Central bank can control the inflation from monetary aspects only and the outside of it is out of the control of Bank Indonesia and might need fiscal policy to correct the inflation if it is cannot correct by itself. Bellow is the framework about the influence of each independent variables towards the dependent variable for this research based on the theoretical framework, previous research, and hypothesis that has been described above.

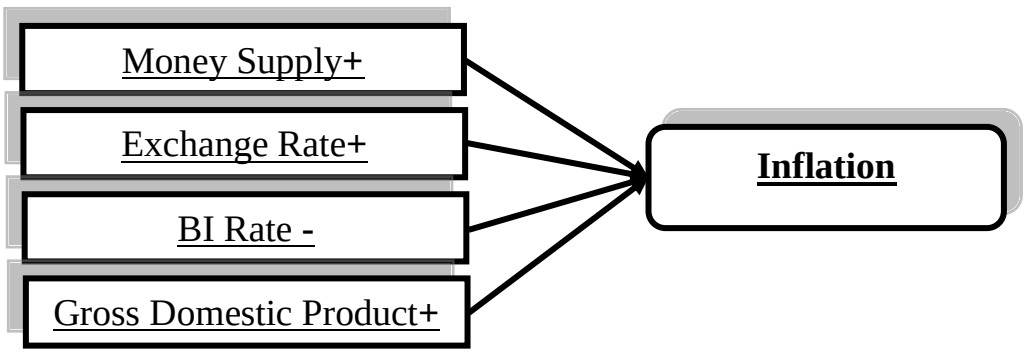


Figure 2-7 Research Framework