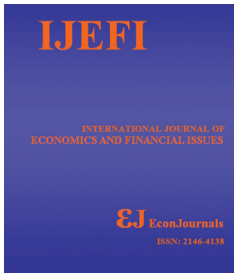

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Determinants of Factors that Affecting Inflation in Malaysia

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ABSTRACT

Inflation became a one of the serious matters over a period of time. It can be said that, throughout the past few years, Malaysia's inflation is caused by many factors. The aim of the paper is to determinants of factors that affecting inflation in Malaysia This paper consists of quantitative method and the econometric model is used for identify the relationship between the dependent and independent variables. It can be categorized two models in this paper namely mathematical model and econometric model. In this paper, it has been discussed the autocorrelation, multicollinearity and Heteroscedasticity. High inflation may cause negative impact to a particular country.

Keywords: Inflation, Money Supply, Exchange Rate, Unemployment Rate
JEL Classifications: E5, E23, E31, F31

1. INTRODUCTION

In general, inflation became one of the serious matters over a period of time. It can be said that, throughout the past few years, Malaysia's inflation is caused by many factors. These factors either caused by economically or caused by external factors apart from economy.

The economy factors are divided into monetary and non-monetary factors as well. Under the monetary factors, the money supply is one of the economic factors that caused inflation in Malaysia. Research by Cheng and Tan (2002), found that money supply has a positive relationship on inflation rate. If the effect of money supply on inflation rate is known important means, then the government should try to implement the suitable monetary policy to control the inflation rate in Malaysia due to the effect of money supply.

Research by Menji (2009), found in her study that exchange rate has a negative relationship on inflation according to her research that conducted in Ethiopia. She also said that exchange rate and inflation has an insignificant impact. Low-cost sometimes means the perception of poor quality of services; however, the market infiltration gives further indication that market has challenged established ideas by developing low-cost that fare and facilities required to satisfy the customer (Sarker and Islam, 2013).

International trade has a fundamental role in the economic growth and development. Exports promotion policy is frequently in agreement with the principle of proportional advantage, when country concentrates in a product, which can produce competitively (Abidin et al., 2016). The Brazil, Russia, India, China, and South Africa (BRICS) is not only an economic concept but it is also a physical/material template. The BRICS appeared likely to become the largest global economic group by the middle of this century. The role of this group in global affairs continues to gain momentum (Abidin et al., 2016).

Unemployment rate has a negative relationship with inflation rate. This is because, according to the Philips curve, the inflation rate will decrease when the unemployment rate increases and vice versa. This trade-off relationship can be explained by Philips curve.

In economics, inflation is known as a rise in the general level of prices of goods and services in an economy over a period of

time. When the price level increases, each unit of currency buys fewer goods and services. In short it can be said that inflation is a sustained rise in the general price level. The general price level is a price is something that reflects the overall price level for goods and services in an economy at a particular time. Inflation may cause many negative impacts on economy growth of a country and the country itself. High inflation rate will increase the living cost and the living standards of people in a particular country.

Al-Nasser et al. (2013) addressed that it is even more important than low prices and web presence as online customers are provided with more product or service choices with reduced costs. The perceived service quality includes guarantees customized services and performance of delivery. Islam and Patwary (2013), discussed the corporations are feeling anxiety of high costs in order to think either they should hire disabled employees or not. Few disabled experts demanded, those organizations hire the disabled employees they are being posed for some additional work, spare costs. Market implications help in either encouraging or discouraging the purchase of such product in the economy. It may also help in determining the direction of the local industries and the marketability of their product, which help in increasing productivity or improvement in such products (Islam and Abdullah, 2013). The success of emerging economies from Asia, in terms of their exports, has ignited great interest to comprehend the international marketing strategies used to enhance export performance in the Asian region (Alshammari and Islam, 2014).

It is also one of a government policies instruments vide new economic model that was introduced by Malaysian Prime Minister Najib Razak on 30th March 2010 in order to transform economy in Malaysia from a middle- income to a high-income economy by the year 2020. Human capital plays an important role in achieving economic growth and development (Islam et al., 2016a). In the effort to attract the automotive manufacturers and major international component to invest in Malaysia, government has developed good government policies which emphasizes on political and economic stability, well economic fundamentals, as well as practical (Islam et al., 2016b).

In Malaysia this is become very hot issue after government implements the good and service tax (GST). Malaysian people itself feel that this GST implementation causing negative impact on society, and causing inflation as our country is highly dependable on domestic consumption. As a upper middle income country, and now taxed by GST causing consumer domestic market were shrink and it would definitely causing high inflation. Inflation also may cause negative impact on investment in our country. By increasing the price level, the production of goods and services exported might be loss the competitive among investors as well. Thus, income from export will decreases and this will lead to decrease the investment among the particular industries as well.

In Malaysia, the government had informed to the society that the high poverty and inequality (headcount measure) problem on 1998 happen due to the high inflation and unemployment level itself. This situation became very serious with the high price level on goods and services in Malaysia. This is happen due to the rising cost of imported intermediate goods on 1998. Basically, there are two main types of inflation. They are demand pull inflation and cost push inflation. Demand pull inflation is a type of inflation, where the main impact comes from demand side (Laporan Ekonomi 1997/1998). Factors such as increase in money supply, increase in government expenses, increase in exports and etc., may lead to the constant increase in demand pull inflation.

When the demand is increased and couldn't reach the equal increase in supply, automatically will cause the general price level and this may cause inflation to be happen in a particular country. Cost push inflation is a type of inflation, where the main impact comes from supply side. Factors such as increase in price of raw materials increase in wage rate, and etc., may lead to the increase in production costs in industries. Therefore, the general price level of goods and services will rise sustainably. As this kind of situations cause inflation to be happen when the general price level increase. So, we can say that there are many factors that determine inflation. This research study is analyzing the 3 main factors that cause inflation are unemployment rate, money supply and exchange rate as well.

Malaysia is known as an upper middle income country like America Samoa, China, Singapore and Thailand. When comparing with his countries, Malaysia can be said that has low inflation. Figure 1 shows the inflation rate (consumer price) annually from the year 1980 until 2014.

Figure 2 shows the regional comparison of inflation rate among the upper middle income countries. Different country had face different effect of inflation trend. Comparing with Singapore and Thailand, Malaysia has faced low inflation during this period of time. Overall, during year 1980 until 2014, America Samoa and China faced almost high inflation throughout these years. As a developing country, Malaysia has to overcome inflation by concentrating the factors that affecting inflation.

The average inflation rate for Malaysia stated 2.9% per annum historically. Although Malaysia has go through the low inflation rate when compared to global wise overall for around 51 years back, but it could face the high inflation in three periods. The three periods of time that go through high inflation in Malaysia is during 1980s, early 1990s and late 2000s. Figure 2 shows the trend of inflation rate in Malaysia from year 1980 until 2014.

During 1980s, global oil prices increased dramatically due to the Egypt-Israel War which happened on 1973, Iranian Revolution in 1979 and Iran-Iraq War during 1980s. This cause the global oil shocks and give an impact on domestic retail fuel prices to be increased. The prices increased in a high rate because of the interruption in global energy and food supply. Food prices were increased significantly, due to the shortage in global food supplies. The inflation rate in 1980 was 6.7% increased to 9.7% on 1981 correspondingly (Laporan Ekonomi 1980/1981).

During 1990, Malaysia's inflation rate was 2.6% and after that it stayed above 3% from the year 1991 until 1996. On 1997 the inflation rate drop to 2.7% and remain constant on 1999 but in 1998

Figure 1: Inflation, consumer prices (annual %)

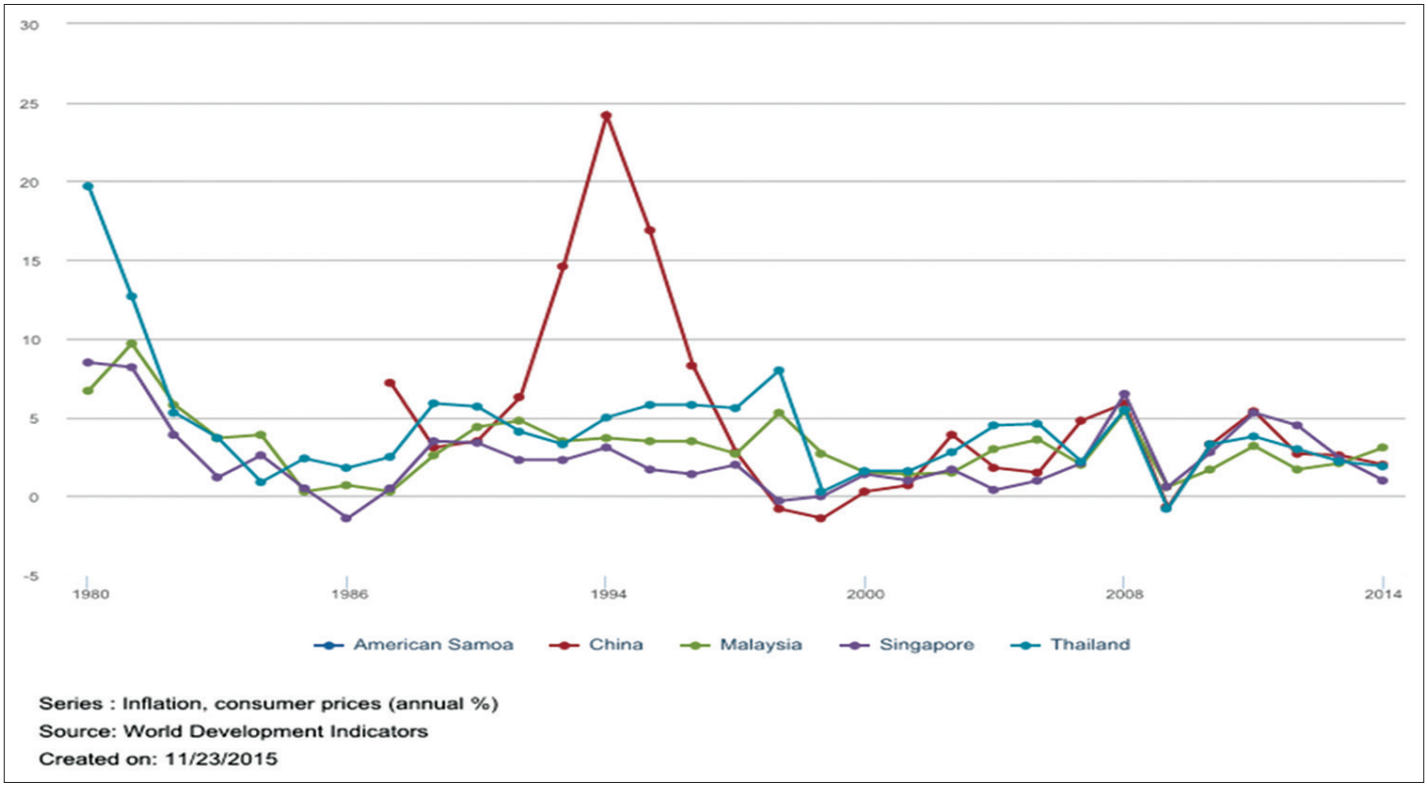
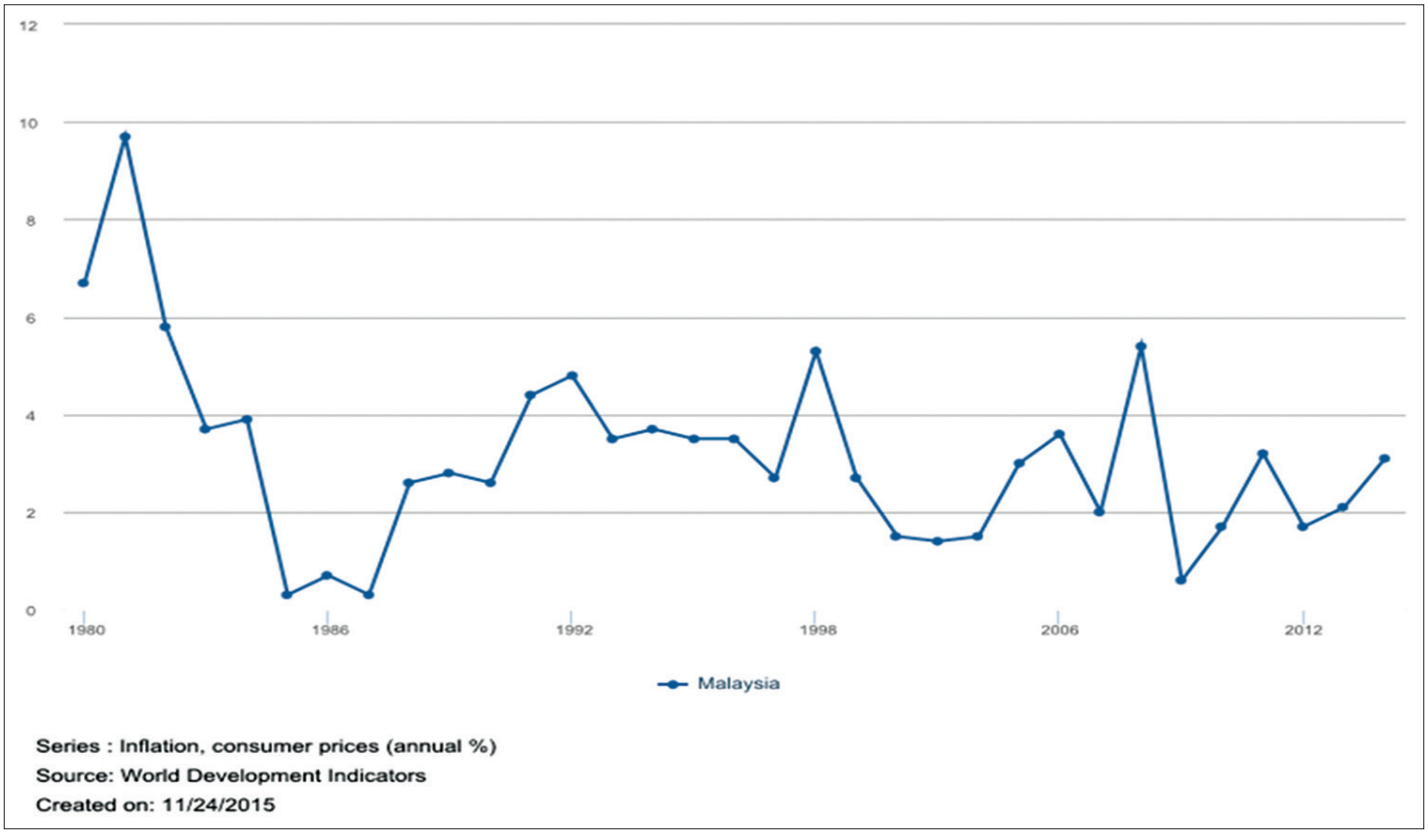


Figure 2: Inflation rate in Malaysia (1980-2014)



it was increased so high 5.3%. Throughout 1990s, the domestic supply factors, mainly the food contributed to the changes in inflation rate in Malaysia. Labor shortages, governments' adjusted price level, bad weather conditions, shortage in land cultivation and high capacity on utilization cause limitation on food supply during the era. The prices of fruits and vegetables, fresh market goods

like fish and meat also increased (Laporan Ekonomi 1990/1991). In 1998, inflation rate in Malaysia increased from 2.7% to 5.3% due to the depreciation of the ringgit around 28.2% against US Dollar during the end of the year 1997.

This increase the arising cost from higher import prices. To overcome this problem, the government imposed ceiling price on five main administered items such as milk, sugar, cooking oil, flour and chicken as well (Laporan Ekonomi 1997/1998). During the early 2000s, Malaysia's inflation rate was in a very low level because of the demand and supply pressures that happened in 1990s.

From the year 2000 to 2004 the inflation rate was in above 1%. However, the inflation rate started to climb up on 2005 and reached a peak of 5.4% in 2008. Higher global financial crisis and the higher global commodity and food prices are the main external factors that give the impacts on higher inflation rate during this period. Malaysia is facing the inflation rate above 3% which is increased from 2.1% to 3.1% in 2014. Following years, inflation rate in Malaysia is expected to be 2.40% by the end of this quarter, according to Trading Economics global macro models and expectations (Laporan Ekonomi 2012/2013). Shortly, in the long-term, the Malaysia Inflation Rate is projected to trend around 3.05% in 2020, 2.34% in 2030 according to our econometric models.

This study is considered as one of the important research because it will help to identify the factors that affecting inflation in our country, Malaysia. The result of this study will be tested using few major statistical test procedures. It is hoped that this research study will guide the consumers, government and also the investors and private sector firms as well. As a consumer, this research study would be useful for them by aware on consumer price index (CPI).

As a policy maker, the government can use the result of this research on implementing monetary and fiscal policies to overcome the inflation rate in Malaysia. For the firms, the findings will be helpful in managing their business planning especially on product's price and also on output decisions in their business.

2. LITERATURE REVIEW

2.1. Inflation

A research by Amadeo (2012) found that, inflation is when the price of the most goods and services continue rising upward. This situation may cause the standard of living cost falls because, we have to spend a lot of money to get the same amount of goods and services that we bought previous time. Cheng and Tan (2002) stated that, inflation rate in Malaysia was overcome well in a right way during the financial crisis that faced by the country compared to other countries that faced high inflation during that time. Cheng and Tan (2002) identified that, economically inflation affect many factors and lead to economic problems which can drop the economy growth of a particular country. According to Friedman (1977), he claimed that inflation is always and everywhere a monetary phenomenon where, he said that inflation is a situation which makes the price level to be increased gradually without limitation in a particular country.

2.2. Money Supply

Dwyer and Hafer (1988) said that inflation and money growth have a positive relationship with each other. The relationship between these both instruments depends on money demand and money supply. Increase in money supply will increase the money growth and at last it will increase the inflation rate in a particular country too. Barro (1990) and Poole (1994) said that there is a positive relationship between money supply and inflation rate.

Both of them claimed that this both variables have high correlation meaning that, when money supply increase then the inflation rate also will increase. Pakko (1994) also have a same viewpoint as Barro (1990) and Poole (1994) about the positive relationship between money supply and inflation rate. He analyzed a research about the relationship between money supply and inflation rate using the time series data for 13 countries. Based on his research he identified that high inflation rate in a country is happen due to high money supply in the particular country itself.

Christensen (2001) said that money supply and inflation rate have a direct or positive relationship in long term. An increase in money supply in a money market will increase the demand for goods and services as well. Therefore, more amount of money chasing towards less amount of goods and services will results the problem of inflation. Alvarez et al. (2001) said that money supply has a positive relationship with inflation rate. This is because, when Central Bank decided to increase the money supply in market, undoubtedly it will decrease the interest rate at the same time. So, this situation will lead to problem of inflation as the money supply in market is increasing unlimitedly.

According to Grauwe and Polan (2005) claimed that inflation rate and money supply have positive relationship. Increase in money supply will increase the inflation rate in long term. In their research they used the data from International Financial Statistics for money supply M1 and M2 from year 1969 until 1999. They found that the results show a positive relationship between money supply and inflation rate the correlation between M1 and inflation is 0.877 where, the correlation between M2 and inflation is 0.89. Shelley and Wallace (2005) have a same viewpoint as Grauwe and Polan (2005) whereby, they also agreed that inflation rate and money supply have positive relationship with each other. Unlimited of money supply in market will lead to high inflation rate. In their research, they found that these variables have a high correlation in long term between 8 and 10 years. Rolnick and Weber (1998) had a research using an empirical method by using the data from 15 countries such as Argentina, Brazil, Canada, Chile, France, Germany, Italy, Japan, Netherlands, Norway, Portugal, Spain, Sweden, United Kingdom and United States.

He use these counties for analyze the relationship between inflation rate and money supply. Based on this research, they identified that money supply has high correlation value with inflation rate which is 0.99. The research by Christiano and Fitzgerald (2003) analyzed the relationship between inflation and money supply in United State (U.S) from year 1900 until 1960, found that these variables have a positive relationship and significance among each other as well. A research that conducted by Vera (2010) said that, high money supply can lead to high inflation as well. He also said

that income distribution has conflict claims due to the high price of goods and services.

Research by Husain (2007) found that, based on his result on the co-integration test among domestic money supply and domestic inflation rate, he found the relationship between money supply and inflation rate. A study by Cheng and Tan (2002) found that, money supply is the main factor that effects inflation. They proved that money supply has a significant positive effect on inflation. According to the result from the data that used for the research, it was proved that money supply has a significant positive effect on inflation rate. A research done by Armesh et al (2010) found that money supply has positive relationship on inflation. They used ordinary least square (OLS) to identify the relationship between inflation and money supply.

Annual time series data from 1961 until 2005 were used in this case. Based on OLS estimation, the results proved that there is a positive relationship between inflation rate and money supply. The log run coefficient of the regressed has a positive value which was expected and it was statistically significant. Based on this thing they concluded that money supply has positive impact on inflation in long run in Iran.

2.3. Exchange Rate

Ferrero and Seneca (2015) identified, a central bank with a mandate to stabilize CPI may raise interest rates to limit the inflationary impact on exchange rate from depreciation. Besides, Chinese Renminbi with U.S Dollar faced that the changes in import price affect the exchange rate. A research done by Cheng and Tan (2002) said that, inflation rate has negative relationship with exchange rate. According to Olatunji et al. (2010) declared that, exchange rate have negative influence on inflation rate. He analyzed the factors that affecting inflation in Nigeria by using time series data.

He applied Johansen method to get the result to solve the problem. This research reveals that previous year agricultural output, previous year CPI for food and previous year exchange rate has negative relationship on inflation rate in Nigeria. Studies conducted by Aurangzeb (2012) said that all the independent variables have significant impact on the inflation rate. He argued that factors such as interest rate, exchange rate and unemployment rate have negative relationship with inflation rate.

2.4. Unemployment Rate

Ponzoni and Zilli (2015) found the trade-off relationship between inflation rate and unemployment rate. They analyzed this relationship based on the inflation in Brazil using Phillips curve. They also said that there is a positive relationship between output and inflation rate. Furuoka (2007) analyzed the relationship between inflation rate and unemployment rate. He analyzed this relationship by using the time series data from 1973 until 2004 in Malaysia. This research was tested using Johansen co-integration test. The results showed that, there is a negative relationship between unemployment rate and inflation rate in long-run.

Phillips (1958) a British economist identified the inverse relationship between unemployment rate and inflation rate. According to the Phillips curve, a continuous increase in aggregate demand cannot be accommodated by an increase in aggregate supply as all the resources were fully utilized due to the continuous rise in price level. During this period, the unemployment rate was low as the employability rate on that time was high. Therefore, inverse relationship between unemployment rate and inflation were formed.

Benoit (1975) said that inflation has a negative relationship with inflation rate where it is concluded based on the Phillips curve. Based on his research, he said that inflation rate couldn't reduce the problem of inflation fully. However, it can reduce the inflation from high lever to lower level slowly. Thus, high inflation rate will cause the unemployment rate to be low and vice versa.

Mankiew (2000) said that, according to the agreement among Central Bank and members of monetary economy where, when a contractionary monetary policy conducted for reduce the inflation rate. Holden (2001) said that inflation rate and unemployment rate have an inverse relationship. The government couldn't afford to control both of these variables simultaneously. This is because, when the government decided to reduce the unemployment rate, unfortunately they have to face the problem of high inflation rate and vice versa. This shows the negative relationship between inflation rate and unemployment rate respectively. Wyplosz (2001) carried out a research using data from four countries namely France, Germany, Switzerland and Netherlands. He obtained a result which shows that inflation rate in long term is not linear towards inflation rate. He concluded that, lower inflation rate is good for economy growth of a country. Guha and Visviki (2001) according to their research using an empirical method on United States from year 1949 until 1999 using time series data of CPI. It was analyzed under urban or rural side and statistic of number of labors in U.S as well. Based on this research they identified that unemployment rate has an inverse relation on inflation rate or trade off. The lower the unemployment rate, the higher the inflation rate.

Linzert (2003) also identified the negative relationship between unemployment rate and inflation rate based on his research which was carry out under 10 Europe countries such as Austria, Belgium, Finland, France, Germany, Ireland, Italy, Netherlands, Portugal and Spain from year 1970 until 1990. The result showed that, the lower inflation rate causes the high unemployment rate and it shows an inverse relationship as well.

Friedman (1976) had a different view compared to others, where he argued that both inflation rate and unemployment rate have a direct relationship or positive relationship. He said that an increase in inflation rate, will increase the unemployment rate directly and this phenomenon called as stagflation. This phenomenon is happen due to many factors such as oil price level which affect the world economy.

2.5. Theories of Inflation

Philips curve explain about the relationship between unemployment rate and inflation rate in economy. During inflation, the value of money will fall. The low inflation rate results that the price of goods and services will not increase gradually. Besides,

unemployment rate refers to groups of labor who willing to work in a particular job, with a particular wage rate, but couldn't obtain it due to some economic problems.

In 1958, William Philips said about the trade-off relationship between inflation rate and unemployment rate in the United Kingdom. The only, the inverse relationship between these variables has been known as Philips curve. Since, William Philips made this decision in the end of 1950s; numerous studies have been done with the aim of confirm his proposition. He formed the curve which shows the relationship between inflation rate and unemployment rate. The curve showed the negative relationship among these variables.

We can say that, if unemployment rate increase, then the inflation rate will decrease and vice versa. If the unemployment rates decrease, then the inflation rate will increase. Figure 3 showed the Phillips curve. According to the Figure 3, inflation rate has a negative relationship with unemployment rate. This shows that, an increase in inflation rate will lower the unemployment rate and an increase in unemployment rate will lower the inflation rate as well. When there is a full employment, the labor market will go through shortages. This will lead to problems on wages to be increase. Since, wages which is from a high percentage of total costs, the price of related goods and services in increased by firms in a way to transfer the increased costs to their customers.

Besides having a theoretical view, Phillips curve also included the political implications too. One of the main policies that this curve included is about the policy targets of central bank in stabilizes the price by controlling the inflation rate. Central banks tend to develop their monetary policies by using this way, so that they can keep make sure the inflation rate in lower level. In this context, the Phillips curve has being an important consideration for the decision makers and the central banks as well.

2.6. Quantity Theory of Money

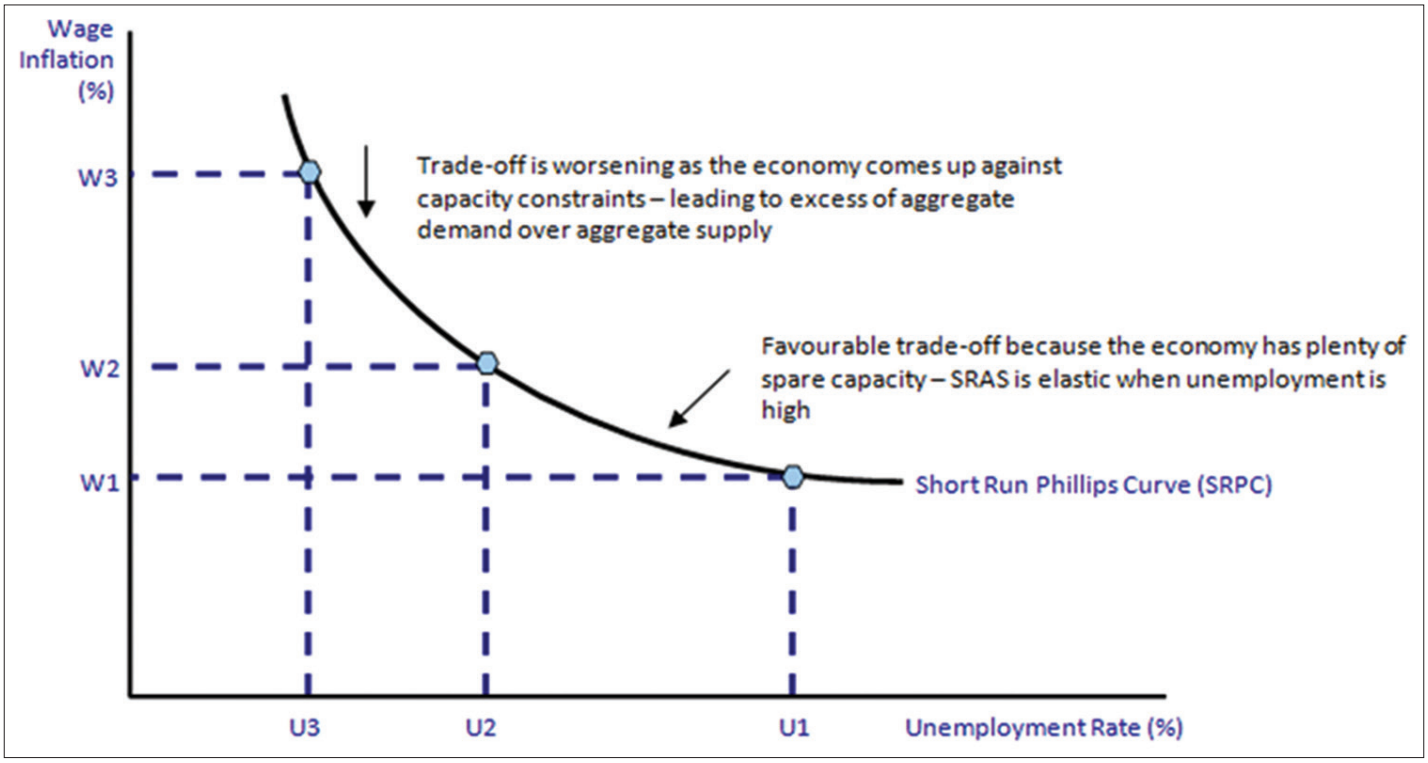
According to the quantity theory of money, under monetarist model, Milton Friedman (1969) the father of monetarism and Nobel laureate in economics said that excess supply of money in an economy leads to domestic inflation. He also said that, inflation is always and everywhere a monetary phenomenon and argued that the changes in overall price level are only brought about by the changes in monetary stock or money supply. This means that, when money supply increases by a certain percentage, it will affect the price level to be increase by the same percentage respectively. This theory also mentioned that inflation rate caused by the rise in money supply, but it is not followed by an increase of output in economy.

The relationship between money supply and price level in theory: The relationship between money supply and the general price level, as implied in the refined quantity theory of money, which is associated with Milton Friedman, is captured in the following equation. MV = PY.

Equation MV = PY

Where,
M = Money supply or quantity of money
V = Velocity of circulation of money
P = Price level
Y = Real national income.

Figure 3: Phillips curve: Inflation and unemployment rate



The above equation MV = PY is called as "equation of exchange." The equation shows that, the total value of payments (quantity of money times the velocity, MV) equals to the money value of national output (output times price, PY). Here, "V" is assumed to be remains constant while, every change that happen in M will produce a similar change in either price level or real national income. It is assume that, the economy is operating at full employment level of output then, changes in Y will be so difficult. Figure 4 has been showed in the following.

Therefore, every change in M will cause only the P to change. On the other hand, if the economy operates at less than full employment level of output, then a change in M will get reflected more in Y than in P. As a result, the excessive increase in money supply, will lead to excessive increase in price which cause inflation. Besides, the changes that happen in stock of money will effects the price level and real national income in an economy, according to the movement in the velocity of money. Stability of the velocity of money alternatively means stability of the demand for money, as both are inversely related.

3. RESEARCH METHODOLOGY

3.1. Research Model

This research consist of quantitative method and the econometric model is used for identify the relationship between the dependent and independent variables. We can categorize two models in this research namely mathematical model and econometric model.

Regression model:

$$INF = ß_0 + ß_1 MSS + ß_2 EXCR + ß_3 UNEMP + \mu$$

Where,
INF = Inflation
MSS = Money supply
EXCR = Exchange rate
UNEMP = Unemployment rate
μ = Error that obtained from the data that collected
$ß_0$ = Intercept
$ß_1$, $ß_2$, $ß_3$ = Partial coefficient to MSS, EXCR and UNEMP.

Based on this econometric model, the dependent variable is inflation and the independent variables are money supply, exchange rate, and unemployment rate.

3.2. Method of Data Analysis

The annual data is analyzed by using the time series data that have been collected form World Development Indicator. The software used for the data analysis is Statistical Package for the Social Sciences (SPSS) version 22. This software helps in the process of interpretation of the collected data in order to test the significance of dependent variable and independent variables accurately. There are two types of test that will be carried out in this research namely Pearson correlation test, regression test, autocorrelation, multicollinearity and Heteroscedasticity.

3.2.1. Autocorrelation

This test is use for identify the Durbin Watson (d-test) for test autocorrelation in the economic model that formed. The value of Durbin Watson that obtained from the SPSS result, will be check after referring the lower limit and upper limit of d value based on d statistic that obtain.

3.2.2. Multicollinearity

Multicollinearity identified by the variance of inflation (VIF) factor from the model. If the VIF value exceeds 10, it means the collinearity among the variables is so high. Inversely, if the collinerity value id lower than 10, then it can be said that, it has a low collinearity.

3.2.3. Heteroscedasticity

It is a collection of random variables where, there are sub-populations that have different variability when computed to others. Variability can be quantified by the value of the variance or any other measure of statistical dispersion. Economically, Heteroscedasticity is the absence of homoscedasticity. It can be said that, if the significant value more than 0.05, then Heteroscedasticity will exist. If the significant value lower than 0.05, then there is no Heteroscedasticity.

4. RESULTS AND DISCUSSION

4.1. Descriptive Statistics

Table 1 shows the results obtained under statistic descriptive analysis. It shows the value of min, value of standard deviation and also the number of samples for the variables that used in this research.

4.2. Regression Analysis

Regression equation is an equation which expresses the linear relationship between variables which shows in Table 2.

$$INF = ß_0 + ß_1 MSS + ß_2 EXCR + ß_3 UNEMP + \mu$$

$$INF = 10.247 + 0.020\ MSS - 1.688\ EXCR - 0.596\ UNEMP.$$

(2.535) (0.020) (0.593) (0.257)

Based on Table 2, the numerical values in brackets are known as standard error. The econometric model shows the relationship between the independent variables namely money supply, exchange rate and unemployment rate on inflation, the dependent variable in this model. According to Phillips curve theory, the model proved the negative relationship between inflation and unemployment rate where, if there is an increase in unemployment rate, then there will be a drop in inflation rate and vice versa.

Table 1: Descriptive statistics

Variablkes	Mean±SD	N
Inflation	3.051±1.9508	35
Money supply growth	12.5340±15.22094	35
Dollar exchange rate	3.0194±0.57096	35
Unemployment rate	3.937±1.2751	35

If there is a fall on unemployment rate, then there will be a rise in inflation rate. Exchange rate also has a negative relationship with inflation as well. According to monetarist theory, there is a positive relationship between inflation and money supply. If there is an increase on money supply, then there is an increase on inflation rate and if there is a decrease on money supply, then the inflation rate also will fall.

All the computed values that obtained from the SPSS show the function of inflation on these independent variables in this econometric model.

4.3. Autocorrelation

Table 3 showed result of the Durbin-Watson (d-test), the d-test that was computed is d = 1.519. Based on the hypotheses, we shall reject H_0 when computed d-test is less than on the lower limit while we do not reject H_0 when computed d-test is higher than the upper limit of the Durbin-Watson test. Another case is that the test will be inconclusive when computed d-test is in between the lower limit and upper limit of the Durbin-Watson test. Based on what that has been obtained via SPSS, the computed d-test is d = 1.519. The figure for dL is 1.085 while for dU is 1.439. Thus, the test is inconclusive because computed d-test lies between the lower and upper limit. There is inconclusive evidence regarding the presence or absence of autocorrelation in the regression.

To detect autocorrelation:

i. $H_0: \rho = 0$
   $H_1: \rho > 0$.
ii. $\alpha = 0.05$
   $n = 35, k = 3$
   $dL = 1.085, dU = 1.439$.
iii. If $d < dL$, reject H_0
   If $d > dU$ do not reject H_0
   If $dL < d < dU$, test is inconclusive.

4.4. Multicollinearity

The VIF value for all the variables in this result are below the value of 10. Thus, the variables are considered less collinear to the dependent variable. The values are 1.349, 1.268 and 1.123 as well is shown in Table 4.

4.5. Heteroscedasticity

The test for Heteroscedasticity under SPSS it will be using the Glejser test via SPSS. Heteroscedasticity is used to examine whether there is a difference in residual variance of the observation from one period to another. A model that does not have Heteroscedasticity problem is usually a good regression model. The method that will be used for the Heteroscedasticity test will be the Glejser test.

The Glejser test will be as follow:

- If the sig. value > 0.05, there is no Heteroscedasticity problem
- If the sig. value < 0.05, there is Heteroscedasticity problem.

From the results above, the significant value of all variables are more than 0.05 is shown in Table 5. Which means that the regression does not have any Heteroscedasticity problem.

Table 2: Regression analysis

Model	Unstandardized coefficients		t	Significant
	B	Standard error		
1				
Constant	10.247	2.535	4.043	0.000
Dollar exchange rate	−1.688	0.593	−2.849	0.008
Unemployment rate	−0.596	0.257	−2.316	0.027
Money supply growth	0.020	0.020	0.976	0.337

Dependent variable: Inflation

Table 3: Autocorrelation

Model	R	R^2	Adjusted R^2	Standard error of the estimate	Durbin-Watson
1	0.556[a]	0.309	0.242	1.6987	1.519

[a]Predictors: Constant, money supply growth, unemployment rate, dollar exchange rate

Table 4: Multicollinearity

Dependent variable: Inflation		
Model	Collinearity statistics	
	Tolerance	VIF
1		
Dollar exchange rate	0.741	1.349
Unemployment rate	0.789	1.268
Money supply growth	0.890	1.123

VIF: Variance of inflation

5. CONCLUSION

Generally, Inflation is caused by the fall in aggregate supply to equal the increase in aggregate demand. It can be controlled by increasing the supplies of goods and services and reducing money incomes in order to control aggregate demand. High inflation may cause negative impact to a particular country. There are more factors that can be affecting inflation in Malaysian as the R-square value is not more than 60%. It shows that, the three main factor that have been discussed in this research, is just a part of the factors that influencing inflation in Malaysia.

Inflation is a major problem everywhere and it will not only affect a country's economic growth but, will affect the CPI, labor market, will affect investors on investment and etc., the government should try to decrease the unnecessary expenditure on non-development activities in order to overcome the problem of high inflation in Malaysia. This will also put a check on private expenditure which is dependent upon government demand for goods and services. For avoid this kind of situation, it can be suggest that this measure better be supplemented by taxation.

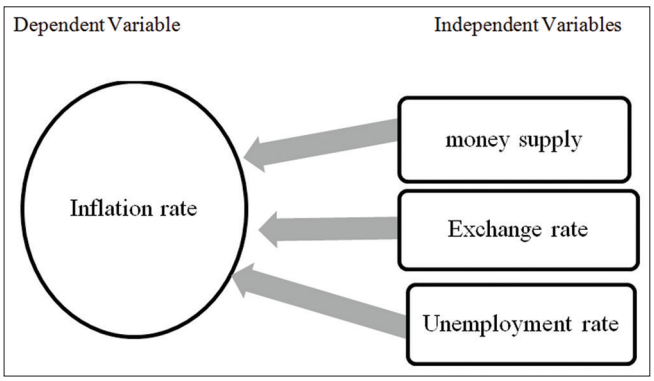
To reduce the unlimited or unnecessary consumption expenditure, the rates of personal, and commodity taxes should be increased but the rate of taxes should not be very high. This is because, it will discourage the good habit of saving, investment and also the production as well. Besides that, to bring more revenue into

Table 5: Heteroscedasticity

Model	Unstandardized coefficients		Standardized coefficients	t	Significant
	B	Standard error	Beta		
1					
Constant	10.247	2.535		4.043	0.000
Dollar exchange rate	−1.688	0.593	−0.494	−2.849	0.008
Unemployment rate	−0.596	0.257	−0.389	−2.316	0.027
Money supply growth	0.020	0.020	0.154	0.976	0.337

Dependent variable: Inflation

Figure 4: Conceptual framework



the tax-net, the government should penalize the tax evaders by imposing heavy fines. Such measures are bound to be effective in controlling inflation. To increase the supply of goods within the country, the government should reduce import duties and increase export duties.

Price control and rationing is another measure of direct control to check inflation. The government try to have the price control by fixing an upper limit for the prices of essential consumer goods and services in market. They have to implement this strategy for particular goods such as sugar, oil, rice and etc. so that the market price will be fixed at the particular rate and no one have the rights to change the price level in market.

Apart from that, by using monetary policy the government can overcome the high inflation problem in Malaysia. One of the ways is, by credit control method where, the Malaysia's central bank must try to control the quantity and quality of credit in our country. For this purpose, it raises the bank rates, sells securities in the open market, raises the reserve ratio, and regulating consumer credit. As we know, monetary policy may not be effective in controlling inflation, if inflation is due to cost-push factors. Monetary policy can only be helpful in controlling inflation due to demand-pull factors.

Moreover, one of the most extreme monetary measures is the issue of new currency by replacing the old one. Under this implementation, one new note is exchanged for a number of notes of the old currency. The value of the bank deposits is fixed accordingly. Such a measure is adopted when there is an excessive issue of notes and there is hyperinflation in the country. Other than that, the government also should try to implement a policy on increasing saving among our community.

To control this, the government should freeze wages, incomes, profits, dividends, bonus, etc. But such a drastic measure can only be adopted for a short period as it is likely to antagonize both workers and industrialists. Therefore, the best course is to link increase in wages to increase in productivity. This will have a dual effect. It will control wages and at the same time increase productivity, and hence raise production of goods in the economy. The responsibility on reducing the inflation rate in Malaysia is a must and all of us, as Malaysian citizen should help the government to overcome this problem as soon as possible. Inflation rate at 2% must be our target, so that we can compete our economy growth with developing countries and for achieve our vision 2020 as well.

REFERENCES

Abidin, I.S.Z., Haseeb, M., Chiat, L.W., Islam, R. (2016), Determinants of Malaysia - BRICS trade linkages: Gravity model approach. Investment Management and Financial Innovations, 13(2), 1-10.

Abidin, I.S.Z., Haseeb, M., Islam, R. (2016), Regional integration of the association of Southeast Asian nations economic community: An analysis of Malaysia - Association of Southeast Asian nations exports. International Journal of Economics and Financial Issues, 6(2), 646-652.

Al-Nasser, M., Yusoff, R.Z., Islam, R., AL Nasser, A. (2013), E-service quality and its effect on consumers' perceptions trust. American Journal of Economics and Business Administration, 5(2), 47-55.

Alshammari, S.D., Islam, R. (2014), Export performance relationship among Malaysian exporters. Advances in Environmental Biology, 8(7), 2287-2300.

Alvarez, F., Robert, E.L.Jr., Weber, W. (2001), Interest rates and inflation. American Economic Review, 91(2), 219-225.

Amadeo, K. (2012), Obamacare Bill: A Summary of the Bill's 10 Titles. Available from: http://www.useconomy.about.com/od/healthcarereform/a/Obamacare-Bill.htm.

Armesh, H., Salarzehi, H., Mohammad Yaghoobi, N., Heydari, A. (2010), Causes of inflation in the Iranian economy. International Review of Business Research Papers. 6(3):30-44.

Aurangzeb. (2012), Factors Affecting The Trade Balance in Pakistan. Economics and Finance Review, 1(11):25-30.

Barro, R. (1990), Macroeconomics. 3rd ed. New York: John Wiley.

Benoit, E. (1975), The inflation-unemployment trade-off, and full economic recovery. The American Journal of Economics and Sociology, 34(4), 337-344.

Benoit, E. (1975), The inflation-unemployment trade-off and full economic recovery. The American Journal of Economics and Sociology, 34(4).

Cheng, M.Y., Tan, H.B. (2002), Inflation in Malaysia. International Journal of Social Economics, 29(5), 411-425.

Christensen, M. (2001), Real supply shocks and the monetary growth-

inflation relationship. Economics Letters, 72(2001), 67-72.
Christiano, L.J., Fitzgeraland, T.J. (2003), The band pass filter. International Economic Review, 44(2), 435-465.
Dwyer, G.P.Jr., Hafer, R.W. (1998), Is money irrelevant? Federal Reserve Bank of St. Louis Review, 70, 3-17.
Ferrero, A., Seneca, M. (2015), Notes on the underground: monetary policy in resource-rich economies, Working Paper 2015/02, Norges Bank, Oslo, Norway.
Friedman, M. (1969), The Optimum Quantity of Money. The optimum quantity of money and other essays. Chicago: Aldine, 1-50.
Friedman, M. (1976), Price Theory. Second Edition. Chicago: Aldine Publishing Company.
Friedman, M. (1977), Nobel lecture: Inflation and unemployment. Journal of Political Economics, 85(3), 451-472.
Furuoka, F. (2007), Does the Phillips curve really exist? New empirical evidence from Malaysia. Economics Bulletin, 5(16), 1-14.
Grauwe, P.D., Polan, M. (2005), Is inflation always and everywhere a monetary phenomenon? Journal of Economics, 107(2), 239-259.
Guha, D., Visviki, D. (2001), What determines inflation in the US, job growth or unemployment? International Journal of Forecasting, pp.447-458.
Holden, S. (2001), Monetary Policy and Nominal Rigidities under Low Inflation. Oslo, Norway: Department of Economics, University of Oslo.
Husain, A. (2007), Determinants of Inflation in Kuwait. Journal of Economic and Administrative Sciences, 23(2):1-13.
Islam, R., Abdullah, A.A. (2013), Marketing implications of consumer behavior for supermarket in Kedah, Malaysia. Australian Journal of Basic and Applied Sciences, 7(6), 479-485.
Islam, R., Ghani, A.B.A., Kusuma, B., Hong, E.T.Y. (2016b), An analysis of factors that affecting the number of car sales in Malaysia. International Review of Management and Marketing, 6(4), 872-882.
Islam, R., Ghani, A.B.A., Kusuma, B., Theseira, B.B. (2016a), Education and human capital effect on Malaysian economic growth. International Journal of Economics and Financial Issues, 6(4), 1722-1728.
Islam, R., Patwary, A.K. (2013), Factors influencing to the policy and strategies used to disabled employment in hospitality industry. Advances in Environmental Biology, 7(9), 2598-2605.
Linzert, T. (2003), The Unemployment Inflation Trade-off in the Euro Area. Department of Economics, Gocthe University Frankfurt.
Mankiew, N.G. (2000), The Inexorable and Mysterious Tradeoff between Inflation and Unemployment. Cambridge, MA: Harvard University.
Menji, S. (2009), Determinants of recent inflation in Ethiopia. Bachelor Degree thesis, Unity University.
Olatunji, B.O., Sawchuk, C.N., Moretz, M., David, B., Armstrong, T., Ciesielski, B. (2010), Factor structure and psychometric properties of the Injection Phobia Scale-Anxiety. Psychological Assessment, 22: 167-179.
Pakko, M.R. (1994), Inflation and money growth in the former Soviet Union. International Economic Contributions, Federal Reserve Bank of St. Louis.
Phillips, A.W. (1958), The relationship between unemployment and the rate of change of money wage rates in the United Kingdom, 1861-1957. Economica, 25, 283-299.
Ponzoni, G.A., Zilli, J.B. (2015), Unemployment and inflation: An estimated Phillips curve for Brazil (2002-2014). Journal of Finance and Economics, 3(5), 77-85.
Poole, W. (1994), Keep the M in Monetary Policy, Jobs and Capital. Santa Monica, CA: Milken Institute for Job and Capital Formation.
Rolnick, A., Weber, W. (1998), Money, inflation, and output under fiat and commodity standarts. Federal Reserve Bank of Minneapolis Quarterly Review, 22, 11-17.
Sarker, M.S., Islam, R. (2013), Competitive market of air industry and competitive advantages for customer satisfaction through pricing strategy of Air-Asia. Journal of Applied Sciences Research, 9(4), 2505-2512.
Shelley, G., Wallace, F. (2005), The relation between U.S money growth and inflation: Evidence from a band-pass filter. Economics Bulletin, 5(8), 1-13.
Vera, L. (2010), Conflict Inflation: an open economy approach. Journal of Economic Studies, 37(6): 597-615.
Wyplosz, C. (2001), Do We Know How Long Inflation Should Be? Graduate Institute of International Studies and CEPR (Mimeo).