A STUDY ON TESTING THE VALIDITY OF PHILLIPS CURVE FOR SRI LANKA

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Introduction

The Phillips Curve was developed in 1958 by the British Economist Alban William Phillips. During this search for explanatory factors for the level of nominal wages, he plotted the money wage changes and the unemployment rate for the British economy based on a yearly data time series with nearly 100 observations and observed an inverse relationship between the two variables. Phillips curve is important for policy makers because of its inverse relationship between inflation and unemployment rate. The inflation rate and unemployment rate are the macroeconomic key variables that analyzed by the policy makers. This study examines the validity of Phillips curve for Sri Lanka.

Research Problem

The research problem of this study is whether the inverse relationship of Phillips curve can be used when making policy decisions in Sri Lanka.

Objectives of the study

I   The general objective

- The general objective of this study is to test the validity of Phillips curve for Sri Lanka.

II   The specific objectives

- To find out the behaviour of inflation rate in Sri Lanka from 1980-2013.
- To find out the behaviour of unemployment rate in Sri Lanka from 1980-2013.
- To investigate the relationship between unemployment rate and inflation rate in Sri Lanka.
- To recommend the validity of the relationship of Phillips curve for Sri Lanka.

Research Methodology

In order to fulfil the objectives set for the study, secondary data over 34 years (from 1980-2013) are used. Referring to Central Bank annual reports, relevant text books and use of internet were the source of collecting methods of secondary data. To analyse the data the SPSS package is used. Descriptive and regression analysis are employed. Data were presented by using the text and   graphs.

Results and Discussion

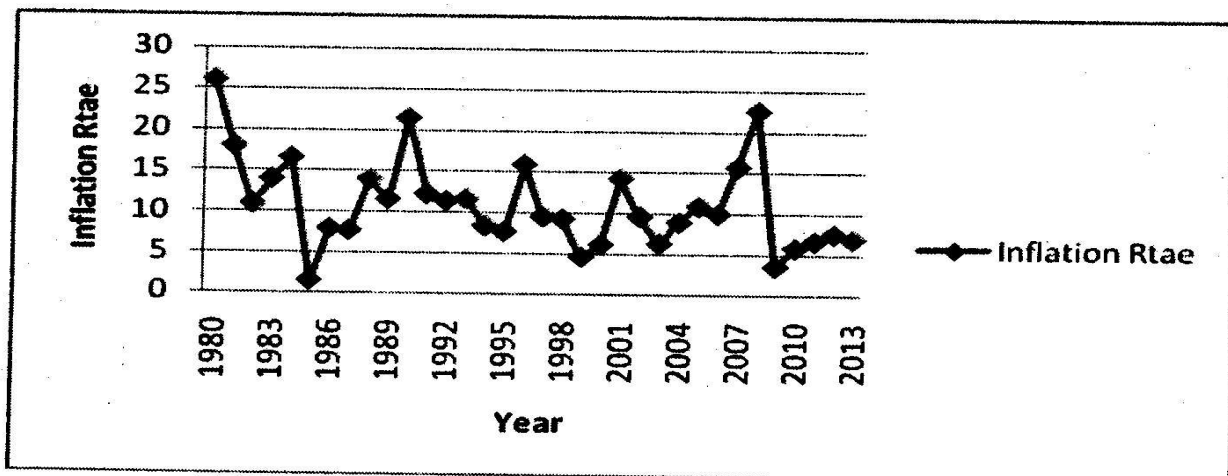Figure 1: Unemployment Rate in Sri Lanka from 1980-2013
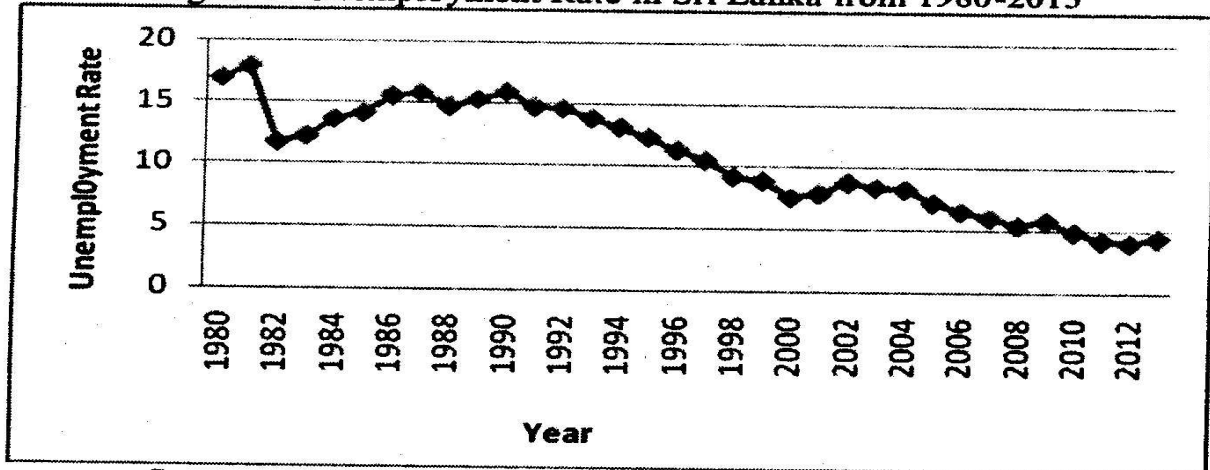
Source:-Author developed by Central Bank Annual Reports

The unemployment rate had declined to 14.8% and this trend continued until the early 1980s.Another reason for reducing the unemployment rate was the commencement of public sector investment programmes such as the Accelerated Mahaweli Development Programme and Export Processing Zone. The unemployment rate which is 15.5% in 1985 due to the civil disturbances .But , after 1997 the unemployment rate was below to 10%.Under the Mahinda Chinthana policy the unemployment rate was remaining below to the 7%.With the structural changes the unemployment rate has also declined. The unemployment rate has decreased from 17.9% in 1981 to 4.4% in 2013.

Figure 2: Inflation Rate in Sri Lanka from 1980-2013

Source: Author developed by using Central Bank Annual Reports

he inflation rate has faced dramatic changes. In 1980 the inflation rate was 26.1% and it has decreased to 1.5% in 1985.However again it has increased to 21.4% in 1990.In 2003 it has decreased to 6.3% and again it has increased up to 22.6% in 2008.At the end of 2013 the inflation rate recorded as 6.9%.

Figure 3:-Relationship between inflation rate and unemployment rate in Sri Lanka from 1980-2013.
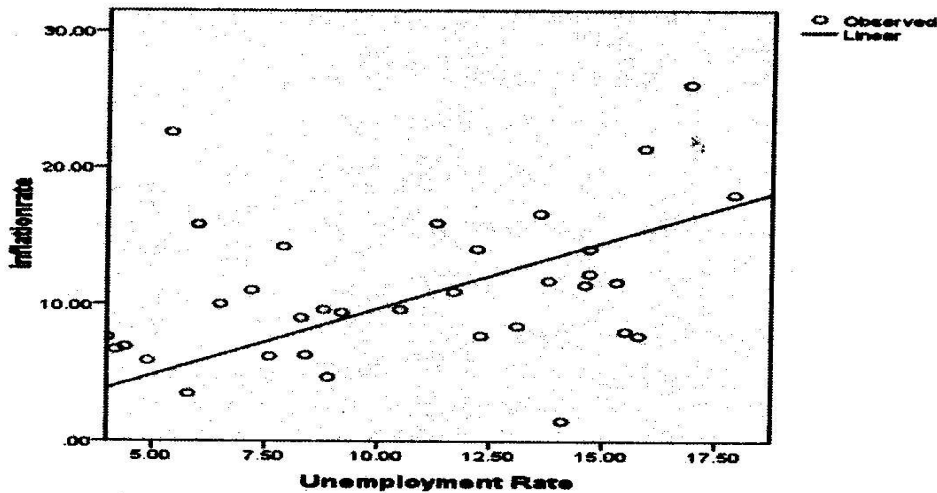
Source:-Author developed by using Annual Reports of Central Bank

According to the scatter diagram it clearly shows that there is an upward trend or positive trend between inflation rate and unemployment rate in Sri Lanka.So this exclude the relationship found by A.W.Phillips between these two variables.

Regression Analysis

According to the regression analysis it also proves the above statement that there is a positive relationship between inflation rate and unemployment rate in Sri Lanka.The simple linear regression equation is as follows.

$\hat{Y}=6.074+0.469X_{1+}U_i$

According to the regression result, the intercept of the regression model is 6.074 and slope coefficient is 0.469.The intercept can be interpreted as when the unemployment is zero, the inflation rate is increased by 6.074 units. Also when the unemployment is increased by one unit, the inflation rate is increased by 0.469 units. So this regression equation is also proving that there is an adverse relationship between inflation rate and unemployment rate in Sri Lanka.

Correlation coefficient of inflation rate and unemployment rate(r) is 0.360 and shows a moderate positive relationship between two variables. Goodness of fit can be interpreted by using the value of coefficient of determinant (r^2) of this regression model and it shows a moderate value which is equal to 0.13.That means 13% of the average variation of inflation rate is explained by the unemployment rate.

Conclusion

Hence this study proves that there is an adverse relationship between the inflation and unemployment rates in Sri Lanka. Therefore policy makers must consider this relationship when they take decisions.

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