DOES EXCHANGE RATE CAUSE INFLATION IN SRI LANKA?
AN EMPIRICAL STUDY

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INTRODUCTION

Acceleration of economic growth and maintenance of macroeconomic stability have been the major macroeconomic objectives in the export –oriented growth strategies adopted by the successive governments in Sri Lanka during the post- liberalization period (from 1977 to date) Besides structural adjustments which are aimed at removing the supply side bottlenecks of the economy maintenance of macroeconomic stability is prerequisite to a successful export –oriented growth regime Policy makers attempting to stimulate economic activities including investment, savings, domestic production and export should curb inflation ,external current account deficit and fiscal deficits. In this regard macroeconomic policy coordination in the areas of monetary and fiscal policies is vital. Recognizing this need, the Central Bank of Sri Lanka has attached greater priority to the objective of price stability in its monetary policy framework in recent times.

Today, inflation and exchange rates have separately been discussed widely in the developed & developing countries. This may be due to the recent financial crises that have caused speculations in the US $ and monetary policies. The subject of how the exchange rate affects inflation has been an interesting topic since the introduction of the PPP theory by Gustav Cassel (1918) due to the assumptions of law of one price in PPP theory. Few studies have shown that there exists a casual relationship between the exchange rate and the inflation. In 1977 when Sri Lanka changed to a floating exchange rate regime from the previous fixed exchange rate regime, the subject of how the exchange rates affect the inflation has become even more popular among authors in this field Research has shown that many variable are affecting inflation, but the exchange rate is an important variable. This study concentrates only on exchange rates. The purpose in this study is to see if there exists a causal relationship between the exchange rate and the inflation if a movement in the exchange rate causes a movement in the inflation and if it does by how much? and other determinant factors of inflation in Sri Lanka. To answer these three questions, the study employs three regression models. the firs is simple & multiple linear regression models second is Co integration approach and the third one is Granger causality test. The data are annual time series data covering 1977-2008 in the Sri Lankan economy which are derived from the various issues of annual report of Central Bank of Sri Lanka.

RESEARCH PROBLEM

The main research question of this study is "Whether there exists any causal relationship between exchange rate and inflation in Sri Lanka?" Despite a number of studies on this relationship, there has been lack of in depth studies in developing countries, in particular in Sri Lanka. This study intends answer to the following questions

(i) Is there any causal relationship between inflation and exchange rate?

(ii) Is the relationship between inflation and the exchange rate stable?

(iii) Is there existence of the long run equilibrium relationship between exchange rate and inflation rate in Sri Lanka?

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OBJECTIVE OF STUDY

The main objective of this paper is to study the dynamic relationship between inflation rate and exchange rate in Sri Lanka.

The specific objectives are:

(i) To investigate the time series properties of the exchange rate and inflation rate in Sri Lanka

(ii) To examine the long run equilibrium relationship

(iii) To investigate the causality relationship between these variables

(iv) To come up with suitable suggestions that can assist future policy making in Sri Lanka.

JUSTIFICATION OF STUDY

Central Banks the worlds over are obsessed about inflation and therefore, devote a significant amount of resources at their disposal to fight inflation. Hence the primary reasons are because of its adverse consequences on individuals and the economy as a whole. The effects of inflation include continuous erosion of the purchasing power of money inequitable distribution of income among earners, loss of social welfare due to price increases and reduction in saving and investments. The Justification of the study is that it intends to answer certain questions such as what are the causal relationship between exchange rate and inflation in Sri Lanka.

This answer will form the basis upon which suggestions will be made as to how inflation can be reduced or eliminated totally or to the minimum level.

METHODOLOGY

The study is based on secondary data on Consumer price index (**CPI**) and Nominal exchange rate (**NER**), for the period of 1977 to 2008.The data were collected from the Annual Reports of the Central Bank of Sri Lanka .All variables are fitted in log form .The estimation methodology consists of four stage .The first stage is to test for unit roots of the relevant time series variable by using Augmented Dicky - Fuller (1981) test and Phillips – Perron -1988) test. These tests have performed to examine the order of integration of time series variable. In stage two for examines the short –run and long- run dynamic relationship among the variable by Co –integration methodology .In stage three ,the Error Correction Model(ECM) is employed to see short -run and long run dynamic of the selected time series variable. In stage four is the Engel- Granger causality test is applied to measure the linear causation between inflation and exchange rate in Sri Lanka.

RESULTS AND DISCUSSION

Empirical results show that all variables are integrated order one. They are stationary in first difference. Co integration result shows that the estimated coefficient for **NER** is statistically significant at the 5% significance level and positive. R^2 statistics is very high and the Durbin – Watson (**DW**) test for autocorrelation in the error term indicates there may be autocorrelation (value =1.74). Error correction model results show that the estimated coefficient of the error term is significant at 5 % level with appropriate (**i.e,negative**) signs. Therefore it shows that 0.50 percent (error correction term – 0.508) of the deviation of the **CPI** from its long run equilibrium level is adjusted by 0.50 percent for each year We used the Engel –Granger method as alternative techniques to see the direction of causality as the last step.The Granger causality results indicate that a causal relationship occurs only in one direction from nominal exchange rates to inflation.

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CONCLUSIONS

This study empirically explores the present relationship between inflation and nominal exchange rate in Sri Lanka using time series data from 1977 to 2008. An assessment of the empirical evidence has been acquired through the Co-integration, Error correction Model and Causality test. The empirical evidence demonstrates that there exists a statistically significant long –run positive relationship between nominal exchange rates and inflation exist. However The Granger causality results indicate that a causal relationship occurs only in one direction from nominal exchange rates to inflation.

These results have important policy implications for both domestic policy makers and the development planers. Many factors are affecting inflation in Sri Lanka such as large monetary expansion exchange rate depreciation government expenditure. In this regard the monetary authority (Central Bank) in Sri Lanka can think of alternative way by working on the expectation channel to reduce inflation and formulate and implement a policy to achieve a low level inflation For the purpose of in-depth analysis, other factors affecting inflation apart from exchange rate, money supply, and government expenditure should be considered.

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