The Dynamic behavior of Current Account Deficit in Sri Lanka

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Introduction

Basic understanding of the dynamic behavior of current account deficit (CAD) is important because it forms the basis for discussion and analysis of other pertinent issues involving balance of payment problems. The behavior of the current account balance of a country conveys important information about a country's macroeconomic performance and provides useful insights about shifts in the stance of macroeconomic policy and other autonomous shocks. Given the small, open and import dependent nature of the Sri Lankan economy, the current account deficit is probably an important macroeconomic indicator for policy decisions and the measurement of economic performance. Under this background, a good understanding of the dynamic behavior of the current account deficit in Sri Lanka is important in many aspects.

The current account balance of Sri Lanka has been showing a growing deficit after liberalising the economy in 1977. An in depth empirical analysis of dynamic behavior of current account deficit of Sri Lanka might provide useful insight for investors, policy measures and direction for future research.

Current account deficit and its behavior have been empirically studied by many researchers under several approaches, including Ang and Sek (2011), Kwalingana and Nkuna (2009), Morsy (2009), Gulzar et al. (2007), Jawaid and Raza (2012).

Theoretically the behavior of current account deficit has been addressed by Keynesian absorption theory, Mundell-Fleming model and Saving-Investment approach. However, very few studies have attempted to examine the current account deficit in Sri Lanka and even in those which have studied, the focus has been mainly on economic aspects. There exists no in-depth technical analysis on dynamic behavior of the Sri Lankan current account deficit.

This study intends to fill this gap in the empirical literature.

Objectives

The basic objectives of this study are to investigate the dynamic behavior of the CAD and the empirical determinants of CAD in Sri Lanka. Meanwhile, the study aims at providing insight to policy makers and investors.

Methodology

The sample covers the period from 1978 to 2011. Data for current account deficit, real GDP growth, foreign reserves, exchange rate, relative income, financial deepening, degree of openness, government budget balance and external debt were gathered from annual report of Central Bank of Sri Lanka, 2011.

Numerical descriptive statistics and graphical displays were used to explore the dynamic behavior of the CAD. Autoregressive model and Generalized Autoregressive Conditional Heteroscedasticity model were used to study the types of dynamic behavior of the CAD. The augmented Dickey-Fuller and the Phillips-Perron tests were administered on CAD series to investigate the random walk nature of the series. Autoregressive fractional integrated moving average (ARFIMA) analysis was used to estimate long memory parameter. Co-integration technique and error correction model were employed to study the long run and short run behavior of these variables. The causality analysis was used to study direction of the causal relationship. E-views 7, STATA 12, Microsoft Excel computer packages were used for data analysis.

Results

The estimated sample moments provide a preliminary description of the properties of the distribution of CAD for Sri Lanka. The standard deviation of CAD (901) is higher than the mean value (738). According to the line graph, there is an upward trend of CAD with high volatility. The estimated Kernel density distribution of CAD is positively skewed and leptokurtic, which indicates that there is a large excess kurtosis (11.24) and there is a heavy tailed character. ADF test and PP test results also prove that the series are non-stationary, $I(1)$, and follow a random walk. The distribution of growth rate of CAD is negatively skewed and has a fat tail. Average growth rate of CAD is 11.5% and is highly volatile (SD=106.96). During 2005-2011 volatility is highest. ARFIMA model estimate indicates that CAD growth series has long-term memory (d=0.21). The spectral density of this series obeys a power law as (as d>0). The Engel-Granger co-integration estimation results indicate that current account to GDP ratio is determined by the degree of openness, government budget to GDP ratio, external debt, financial deepening, foreign reserves, real GDP growth and relative income. Since the

residual series of the co-integration equation is stationary, these variables are co-integrated and have long run equilibrium relationship. All variables are statistically significant at 5 percent level.

Long run equilibrium relationship implies that the CAD is positively related to government budget to GDP ratio, external debt, degree of openness, financial deepening, relative income and real GDP growth while there is a negative relationship with foreign reserves and log of exchange rate.

Causality results show the direction of causality between CAD and its determinants. Current account deficit to GDP ratio granger cause degree of openness (p value=0.032) where Financial deepening (p value =0.04) and log exchange rate (p value =0.01) cause current account to GDP ratio.

GARCH model results indicate that GARCH effect is statistically significant. The sum of the ARCH and GARCH coefficients is very close to one (0.98). Conditional variance is time –varying and volatility is persistent.

Conclusion and Policy recommendations

According to the results of numerical descriptive statistics and graphical displays, we find that the current account deficit in Sri Lanka is persistence over the last three decades. Both the Cointegration and error correction model results suggest a positive and significant long run relationship of current account deficit with government budget, external debt, degree of openness, financial deepening, real GDP growth and relative income, and also a significant negative relationship with foreign reserves and exchange rate. These results have empirically confirmed the relationships explained in both Keynesian absorption theory and Mundell-Fleming model. Results of GARCH model show that the volatility is persistent. Granger causality test proves that the current account to GDP ratio is caused by log exchange rate and financial deepening. The results indicate that exchange rate policy and monetary policy would be effective tools to regulate the persistent deficit in CAD. Further, the government needs to be cautious in financing fiscal deficit.

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