An Estimated Open Economy New Keynesian DSGE Model for Sri Lanka with Monetary and Fiscal Rules

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Abstract

This paper develops a New Keynesian (NK), Small Open-Economy, Dynamic Stochastic General Equilibrium (SOE-DSGE) model for Sri Lanka and estimates it using Bayesian technique, for the period 1996:Q1 to 2014:Q2. The paper is different from most of the other SOE studies available, as it contains an explicit fiscal sector in the model. I use the model framework proposed by Lubik and Schorfheide (2007), as the baseline model and then enhance it with a fiscal block. The model features with Calvo-type nominal price rigidities, complete international asset markets, perfectly competitive retailers, monopolistically competitive intermediate good producers, government debt, distortionary taxes and a perfect exchange rate pass-through mechanism. A standard Taylor-rule type monetary policy reaction function where the nominal interest rate responds to inflation, output and exchange rate, and an analogues fiscal policy rule where tax revenue responds to the government expenditure, output gap and debt, are considered. An attempt is made to accommodate specific features of the Sri Lankan economy in to the model, by carefully selecting priors. Estimation results suggest that the Central Bank of Sri Lanka conducts moderately strong anti-inflationary monetary policy while paying substantial attention to output stabilisation, however, with negligibly small concerns for exchange rate movements. Findings imply high degree of interest rate persistence as well. Further, the fiscal policy rule respond to debt level and government expenditure to a moderately small extent, while stabilizing output, to a smaller extent.

JEL Classification: C15; C32; E52; F41; H30

Key words: Small Open Economy, DSGE Models, Monetary Policy, Fiscal Policy, Bayesian analysis, Sri Lanka

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