Optimal Monetary Policy and Welfare Analysis: a Case Study for Sri Lanka

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Abstract

This paper determines welfare maximising optimal monetary policy rules for Sri Lanka, based on an open economy New Keynesian DSGE model. I solve the model up to second order accuracy which facilitates welfare computation with alternative policy rules.

I consider a standard Taylor-rule type monetary policy reaction function where the short-term nominal interest rate responds to inflation, output and exchange rate. Welfare associated with the Ramsey policy is used as the benchmark for welfare comparisons. I determine optimal monetary policy rules such that the welfare associated with them are as same as that of the Ramsey optimal allocation, conditional on a particular state of the economy in the initial period. Unconditional expectation of welfare is also determined and compared as a robustness measure. The welfare cost of adopting alternative rules, instead of the optimal, are determined to evaluate the relative importance of the different policy rules.

The main findings are: First, the optimal monetary policy rule suggests an aggressive response to inflation and a moderate response to output-gap. Second, the optimal policy advocates a muted response to exchange rate fluctuations, and further, monetary policy reaction functions with positive response to exchange rate can lead to minor welfare losses even. Third, welfare gains from interest rate smoothing are significant. Fourth, the optimised monetary rules yield a level of welfare, very close to that of Ramsey optimal policy. Finally, the welfare losses associated with the current realised monetary policy rule for Sri Lanka can be mitigated significantly, by responding to inflation stronger.

JEL Classification: C6; E5; E6; I3

Key words: Dynamic Stochastic General Equilibrium (DSGE) Models, Monetary Policy, Welfare, Sri Lanka

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