SALOUA CHAOUCHE

High scholl of applied statistic and economic , Algeria

RACHID TOUMACHE

High scholl of applied statistic and economic , Algeria

CONSTRUCTION OF A NEW KEYNESIAN DSGE MODEL (ALGERIA'S MONETARY POLICY APPROACH)

Abstract:

The aim of the paper is to describe the theoretical structure of a New Keynesian DSGE model with sticky prices and wages , as well as a Taylor rule as monetary policy for the Algerian economy.

Moreover, the clear specification of the stochastic shocks allows one to identify the source of economic fluctuations, the model incorporates various other features such as habit formation.
We used the calibration/estimated strategy on key macro-economic variables: GDP, consumption, prices, real wages, employment and the nominal interest rate.

The introduction of two orthogonal structural shocks including productivity, policy shocks allows for an empirical investigation of the effects of such shocks and of their contribution to business cycle fluctuations in the Algerian economy.

Having as benchmark the model of Smets and Wouters (2003, 2007,2011), and Gali (1999). The thesis describes how the model works, how it is estimated, and how it is used for monetary policy analysis. The parameters of the New Keynesian DSGE model are calibrated in such a way that selected theoretical moments given by the model match as closely as possible those observed in the data. One way of achieving this, is by minimizing some distance function between the theoretical and empirical moments of interest.

The output of the simulator is posterior estimates of The New Keynesian DSGE models, are summarized and compared to results in the existing literature.

Keywords:

New Keynesian DSGE model, Monetary policy, Calibration/estimation strategy, Taylor rule, Sticky prices, Sticky wages.

JEL Classification: C51