A Basic Real Business Cycle Model with Gretl (WORK IN PROGRESS!!)

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Abstract

This short text provides a guide to the implementation and resolution of a very simple Real Business Cycle model with the open-source econometric software gretl. The hansl[1] code is a transposition from the MatLab code written by Ryo Kato, available here. This text is also based on the reference presented by Kato (2004)[2] So, as suggested by Kato: "The solution method used in the code is standard undermined coeffcient method (eigen de-composition method) based on log-linearized system".

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[1]Yes, we have hansl and gretl! Hansl is the scripting language.

[2]Available here.

1 Introduction

"Gretl is an econometrics package, including a shared library, a command-line client program and a graphical user interface" Cottrell and Lucchetti (2020). To install it, consult the site http://gretl.sourceforge.net/, it is an *open-source* software! The code, likewise to that written in MatLab, consists of five parts as follows:

1. Parameter proc
2. Steady State proc
3. Model proc
4. Linearization proc
5. Simulation proc

Exactly in the same way of Kato (2004), in this note I will proceed as follows. First, I will illustrate a standard RBC model that will be solved in the code.Then, in Section 3 I will provide instruction for each part of a code.

IMPORTANT: Both text and code are primarily work in progress and far from correct and rigorous. All suggestions are not only welcome but they are dutiful. In order to implement this type of models as well as possible in gretl.

2 The standard RBC Model

References

Cottrell, A., and R. Lucchetti (2020): *Gretl User's Guide*. gretl documentation.

Kato, R. (2004): "A user guide for matlab code for an rbc model solution and simulation," Discussion paper, Department of Economics, The Ohio State University.