

REal Business Cycle with endogenous labour choice

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Abstract

This is documetation to the homework for the course quantitative Macro Theory by Jesus Fernandez Villaverde. It contains the theoretical foundation of the model and and a short description of the programs that are also provided. I choose to code in Matlab and Fortran.

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Description of the RBC Model with fixed labour

Consider a simple RBC model consisting of a representative household whose utility is given by

$$U = \sum_{t=1}^T \beta^{t-1} s(h_t) u(c_t),$$

where

$$u(c_t) = \log c_t$$

is consumption and n is time spent in production. The household has a constant returns to scale technology for producing output given by