

Problem Set 6
Advanced Macroeconomics
Winter 2025/26

Solow Growth Model

Consider the Solow growth model from chapter 5 with permanent shocks on total factor productivity, the savings rate, and the growth rate of population.

1. Summarize the stationary model with variables in efficiency units: what are the dynamic equations? Which variables are exogenous or endogenous? What parameters are given?
2. Derive the analytical steady state.
3. Simulate the model in Dynare with permanent shocks as in the lecture. Assume the same calibration as in the code `Solow_Dynamic.m` from the lecture.
4. Show graphically the development of capital intensity, output and consumption per worker, real interest rate, real wage, and the respective shock variable.
5. Test how the steady state values depend on different parameter values.