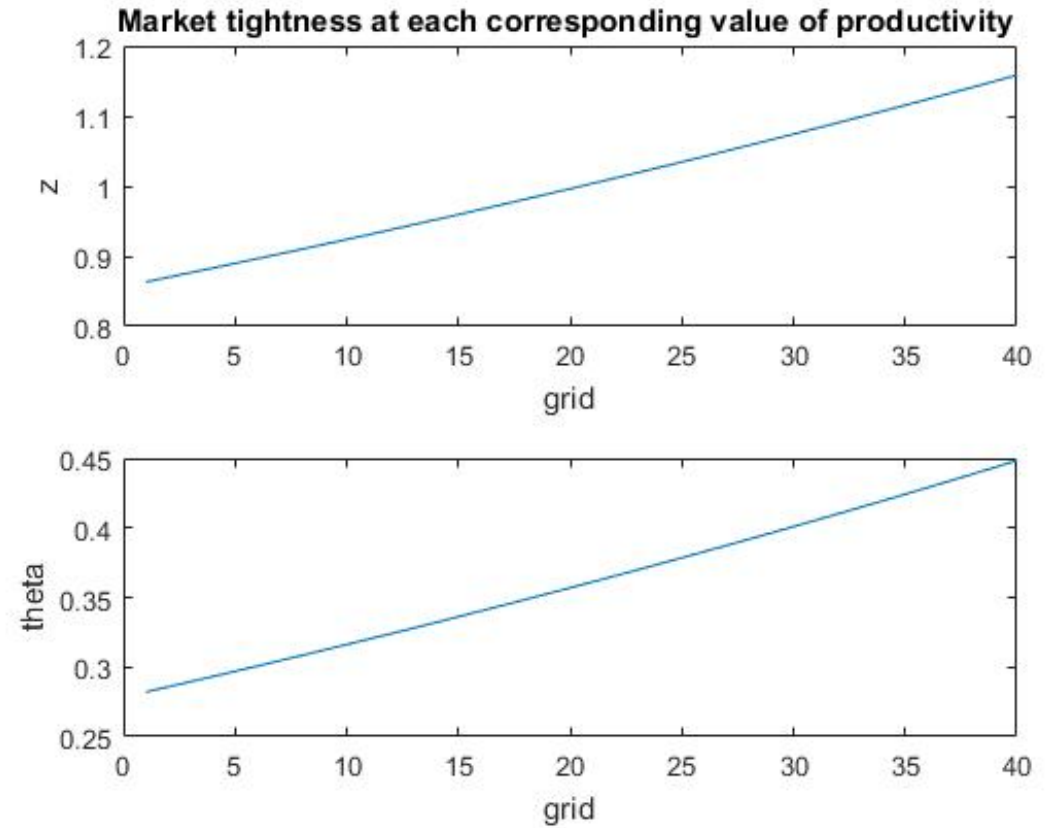


# Outline

- Language used: Matlab
- Main program file: main.m
- Required function: Rouwenhorst.m
- Procedures:
  1. set up the environment
  2. discretize the AR(1) process  $\log(z_{t+1}) = \rho \log(z_t) + \varepsilon_{t+1}$  using the Rouwenhorst's method
  3. find the roots for the nonlinear system of equations
  4. find the stationary distribution by iteration
  5. simulate a sequence from the AR(1) process and plot the results

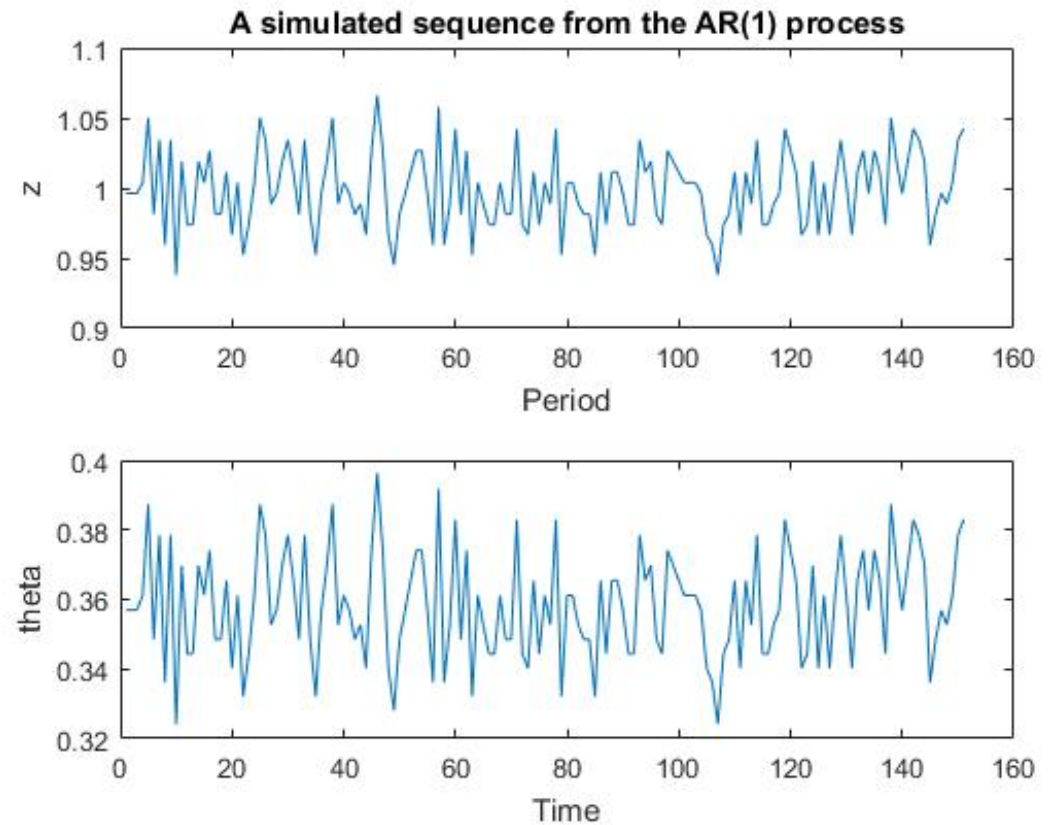
# Baseline Mortensen-Pissarides

- Use Rouwenhorst's method to discretize the AR(1) process
- Grid size = 40, evenly spaced between  $(-\sigma \sqrt{\frac{N-1}{1-\rho^2}}, \sigma \sqrt{\frac{N-1}{1-\rho^2}})$



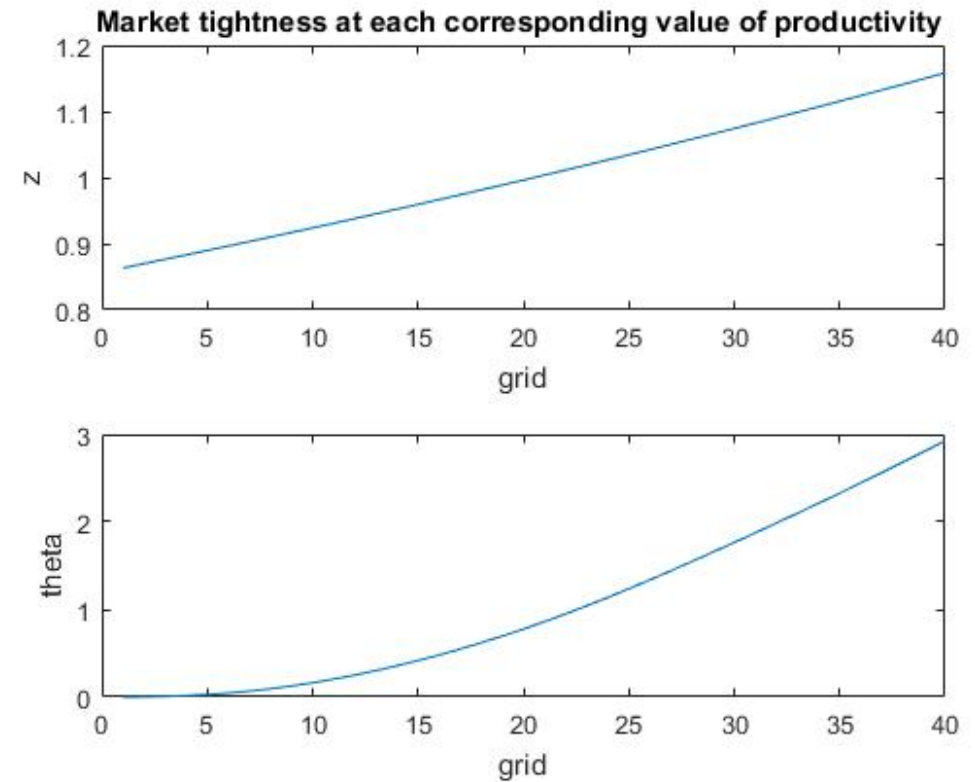
# Baseline Mortensen-Pissarides

- Simulation ( $T = 150$ )



# Hagedorn and Manovskii (2008)

- Bargaining weight for workers  $\mu$ :  
0.72  $\rightarrow$  0.05
- Unemployment utility  $b$ :  
0.4  $\rightarrow$  0.95



# Hagedorn and Manovskii (2008)

- Compared to the baseline case, market tightness ( $\theta$ ) is now more volatile (magnitude of change is larger across business cycles)

