$$\max E_t\left[\sum_{t=0}^{\infty}\beta^t \ln C_t\right] \tag{0.1}$$

subject to

$$C_t + K_{t+1} - (1-\delta)K_t = Y_t \tag{0.2}$$

$$Y_t = A_t K_t^{\alpha} \tag{0.3}$$

$$\ln A_t = \rho \ln A_{t-1} + \epsilon_t \tag{0.4}$$

Euler equation is

$$\frac{1}{C_t} = \beta E_t\left[\frac{1}{C_{t+1}}\left(\alpha\frac{Y_{t+1}}{K_{t+1}} + 1 - \delta\right)\right] \tag{0.5}$$

Log-linearized version is

$$-c_t = E_t[-c_{t+1} + (1-\beta(1-\delta))(y_{t+1} - k_{t+1})] \tag{0.6}$$