Centralized economy of the RBC model from the Florin Bilbiie lectures notes[1]:

$$C_t + K_{t+1} = (1-\delta)K_t + A_t K_t^{\alpha} L_t^{1-\alpha} \tag{1}$$

$$\frac{1}{C_t} = \beta \mathbb{E}_t \Big[\frac{1 - \delta + \alpha A_{t+1} \big(\frac{L_{t+1}}{K_{t+1}}\big)^{1-\alpha}}{C_{t+1}} \Big] \tag{2}$$

$$\chi L_t^{\alpha} = (1-\alpha) \frac{A_t \big(\frac{K_t}{L_t}\big)^{\alpha}}{C_t} \tag{3}$$

[1]This notes are available at `http://sites.google.com/site/florinbilbiie/`