1 Aiyagari Model - Formulae

Euler equation:

$$c_{i,t}^{-\sigma} \geq \beta \left(1 + r - \delta\right) \mathbb{E}\left[c_{i,t+1}^{-\sigma}\right] \tag{1}$$

Budget constraint:

$$c_{i,t} + k_{i,t+1} = \left(1 + r - \delta\right) k_{i,t} + w \left(1 - \tau\right) e_{i,t} + \mu w \left(1 - e_{i,t}\right) \tag{2}$$

Borrowing constraint:

$$k_{i,t+1} \geq k_{min} K \tag{3}$$

Tax rate:

$$\tau = \mu \frac{1 - L}{L} \tag{4}$$

Factor prices:

$$r = \alpha z K^{\alpha - 1} L^{1 - \alpha} \tag{5}$$

$$w = \left(1 - \alpha\right) z K^{\alpha} L^{-\alpha} \tag{6}$$

Employment:

$$L = \frac{\pi_{UE}}{\pi_{UE} + \pi_{EU}} \tag{7}$$

Capital stock of representative agent:

$$K_{rep} = L \left(\frac{z \alpha \beta}{1 - \beta + \delta \beta}\right)^{\frac{1}{1 - \alpha}} \tag{8}$$