

1 Aiyagari Model - Formulae

Euler equation:

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

Budget constraint:

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

includes taxes includes unemployment benefit

Borrowing constraint:

includes differentiation parameter -> real interest rate

$$k_{i,t+1} \geq k_{min} K \quad (3)$$

Tax rate:

$$\tau = \mu \frac{1 - L}{L} \quad \text{new} \quad (4)$$

Factor prices:

$$r = \alpha z K^{\alpha-1} L^{1-\alpha} \quad (5)$$

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

Employment:

$$L = \frac{\pi_{UE}}{\pi_{UE} + \pi_{EU}} \quad (7)$$

Capital stock of representative agent:

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