

$$\beta E_t \left\{ C_{t+1}^{-\sigma_c} C_{t+1}^{\frac{1}{\kappa}} (C_{m,t+1})^{\frac{-1}{\kappa}} \right\} (q_{t+1} + (1 - \delta)) = C_t^{-\sigma_c} C_t^{\frac{1}{\kappa}} (C_{m,t})^{\frac{-1}{\kappa}} \quad (a)$$

$$\beta E_t \left\{ C_{t+1}^{-\sigma_c} C_{t+1}^{\frac{1}{\kappa}} (C_{n,t+1})^{\frac{-1}{\kappa}} \right\} \cdot \frac{p_t}{p_{t+1}} \cdot (q_{t+1} + (1 - \delta)) = C_t^{-\sigma_c} C_t^{\frac{1}{\kappa}} (C_{n,t})^{\frac{-1}{\kappa}} \quad (b)$$

$$C_t = \left[\gamma (C_{m,t})^{\frac{\kappa-1}{\kappa}} + (1 - \gamma) (C_{n,t})^{\frac{\kappa-1}{\kappa}} \right]^{\frac{\kappa}{\kappa-1}} \quad (e)$$