

$$(1-a) b (1-\eta) C_t^{(-e)} c_{Ht}^e h_{Ht}^{(-1)} = (1-b) l_t^{(-1)} \quad (1)$$

$$C_t^{(-e)} a b (1-\tau_h) (1-\theta) c_{Mt}^{e-1} y_t h_{Mt}^{(-1)} = (1-b) l_t^{(-1)} \quad (2)$$

$$\beta C_{t+1}^{(-e)} \left(a (1-\delta_H) c_{Mt+1}^{e-1} + (1-a) \eta c_{Ht+1}^e k_{Ht}^{(-1)} \right) = c_{Mt}^{e-1} C_t^{(-e)} a \lambda \quad (3)$$

$$\beta C_{t+1}^{(-e)} c_{Mt+1}^{e-1} (1+r_{t+1} (1-\tau_k) + \tau_k \delta_M - \delta_M) = c_{Mt}^{e-1} C_t^{(-e)} \lambda \quad (4)$$

$$\theta y_t k_{Mt-1}^{(-1)} = r_t \quad (5)$$

$$h_{Mt}^{(-1)} (1-\theta) y_t = w_t \quad (6)$$

$$y_t = k_{Mt-1}^\theta (h_{Mt} z_{Mt})^{1-\theta} \quad (7)$$

$$c_{Ht} = k_{Ht-1}^\eta (h_{Ht} z_{Ht})^{1-\eta} \quad (8)$$

$$C_t = (a c_{Mt}^e + (1-a) c_{Ht}^e)^{\frac{1}{e}} \quad (9)$$

$$l_t = 1 - h_{Ht} - h_{Mt} \quad (10)$$

$$x_{Mt} = \lambda k_{Mt} - k_{Mt-1} (1-\delta_M) \quad (11)$$

$$x_{Ht} = k_{Ht} \lambda - (1-\delta_H) k_{Ht-1} \quad (12)$$

$$x_t = x_{Mt} + x_{Ht} \quad (13)$$

$$k_t = k_{Ht} + k_{Mt} \quad (14)$$

$$T_t = h_{Mt} \tau_h w_t + k_{Mt-1} \tau_k r_t - \tau_k \delta_M k_{Mt-1} \quad (15)$$

$$y_t = c_{Mt} + x_t \quad (16)$$

$$\log(z_{Mt}) = \rho_M \log(z_{Mt-1}) + \epsilon_{Mt} \quad (17)$$

$$\log(z_{Ht}) = \rho_H \log(z_{Ht-1}) + \epsilon_{Ht} \quad (18)$$