$$\alpha_0 = \left[\frac{1+\tau^{e}_{T,g}}{1+\tau^{e}_{i,g}} \cdot \left(\frac{1-s_{T,g}}{1-s_{0,g}} \right)^{\mu} \cdot \frac{\tau_{T,g} w_{T,g}(h_{T,g}) - \left[\eta \tau_{T,g} \cdot \frac{\partial w_{T,g}}{\partial h_{T,g}} \cdot s_{T,g}^{\phi} \cdot \left(\frac{2\hat{H}_T}{M} \right)^{\sigma} \right]^{\frac{1}{1-\eta}} \cdot a_T^{\frac{\alpha}{1-\eta}}}{(1-\eta)\left[\eta^{\eta} \cdot \tau_{0,g} \cdot A_0 \cdot s_{0,g}^{\phi} \cdot \left(\frac{2\hat{H}_T}{M} \right)^{\sigma} \right]^{\frac{1}{1-\eta}}} \right]^{\frac{1-\eta}{\alpha}}$$

$$s_{i,g} = \frac{\mu\phi}{\mu\phi - \eta + \eta \cdot \tau_{i,g} \cdot \frac{w_{i,g}(h_{i,g})}{e_{i,g}}}$$

$$e_{i,g} = \left[\eta \cdot \tau_{i,g} \cdot \frac{\partial w_{i,g}}{\partial h_{i,g}} \cdot a_i^{\alpha} \cdot s_{i,g}^{\phi} \cdot \left(\frac{2\hat{H}_T}{M} \right)^{\sigma} \right]^{\frac{1}{1-\eta}}$$

$$h_{i,g} = \left[\eta^{\eta} \cdot \tau_{i,g}^{\eta} \left(\frac{\partial w_{i,g}}{\partial h_{i,g}} \right)^{\eta} \cdot a_i^{\alpha} \cdot s_{i,g}^{\phi} \cdot \left(\frac{2\hat{H}_T}{M} \right)^{\sigma} \right]^{\frac{1}{1-\eta}}$$