Croissance Endogène

$$\begin{aligned} Y &= A\,K \\ \dot{K} &= Y - C \\ U(c) &= \int_0^{\infty} e^{-\rho t}\frac{c^{1-\theta}}{1-\theta}dt \\ g &= \frac{A-\rho}{\theta} \\ Y &= A^{\alpha}L^{1-\alpha} \end{aligned}$$

$$\begin{aligned} \dot{A} &= \delta A^{\gamma}(\overline{L}-L)^{\beta} \\ \frac{\dot{A}}{A} &= \delta A^{\gamma-1}(\overline{L}-L)^{\beta} < \delta\overline{L}^{\beta}A^{\gamma-1} \\ &\Leftrightarrow \;\; \frac{\dot{A}}{A} = \frac{\alpha\delta\overline{L}-\rho(1-\alpha)}{\alpha\left[1-(1-\theta)(1-\alpha)\right]} \\ g &= \frac{\alpha\delta\overline{L}-\rho(1-\alpha)}{1-(1-\theta)(1-\alpha)} \end{aligned}$$

$$\begin{aligned} Y_j &= f(k_j, K) \quad ; \quad K = \sum_j k_j \quad , \; \forall j = 1, ..., n \\ u(c) &= \ln(c) \quad ; \quad F(k,K) = k^{\alpha}K^{\eta} \\ K &= \int_0^{A} X(i)di \quad ; \quad \frac{\dot{K}}{K} = \frac{\dot{A}}{A} \\ Y(H_1, L, X_i) &= H_1^{\alpha}L^{\beta}\int_0^{A} X(i)^{1-\alpha-\beta}di \end{aligned}$$

$$\begin{aligned} C(X) &= P_A + \eta r X \\ \bar{X} &= X(i), \forall i \\ Y &= AH_1^{\alpha}L^{\beta}\bar{X}^{1-\alpha-\beta} \\ \dot{A} &= \delta H_2 A \\ H &= H_1 + H_2 \end{aligned}$$

$$\begin{aligned}U(c) &= \int_0^\infty e^{-\rho t}\frac{c^{1-\theta}}{1-\theta}dt\\ g &= \frac{\delta H-\Lambda\rho}{\Lambda\theta+1}=\delta H_2\\ \Lambda &= \frac{\alpha}{(1-\alpha-\beta)(\alpha+\beta)}\\ H_2 &= \frac{H-\rho\frac{\Lambda}{\delta}}{\Lambda\theta+1}\end{aligned}$$

$$A_t=A_o\gamma^t \quad ; \quad P_t=A_tF'(X_t) \quad ; \quad (A_tF'(X_t)-\omega_t)X_t$$

$$U=\sum_{t=0}^{\infty}\left\{\left(\frac{1}{1+\rho}\right)^t\left[\sum_{i=0}^{n_t}C_{it}^{\theta}\right]^{\frac{1}{\theta}}\right\}$$

$$\begin{aligned}n_t-n_{t-1} &= \frac{\widetilde{I}_t}{\gamma}n_{t-1}\\ \frac{n_t-n_{t-1}}{n_t} &= \frac{1-\rho}{1+\rho\theta}\left\{\frac{L}{\gamma}-(1+\rho)\frac{\theta^{\frac{-\theta}{1-\theta}}}{1-\theta}\right\}\end{aligned}$$

$$\begin{aligned}\dot{h} &= \delta(1-u)h\\ \frac{d\dot{h}}{dh}\frac{h}{\dot{h}} &= \delta(1-u)\frac{h}{\delta(1-u)h}=1\end{aligned}$$

$$Q=AK^{\beta}\left[uH\right]^{1-\beta}h_a^{\gamma} \quad ; \quad H=Lh \quad ; \quad \dot{K}=Q-C$$

$$U(c)=\int_0^\infty e^{-\rho t}\frac{c^{1-\theta}}{1-\theta}dt$$

$$\begin{aligned}v &= \frac{(1-\beta)(\delta-\rho)}{\theta(1-\beta+\gamma)-\gamma} \quad ; \quad v^*=\frac{(1-\beta)(\delta-\rho)+\delta\gamma}{\theta(1-\beta+\gamma)}\\ g &= \left(1+\frac{\gamma}{1-\beta}\right)v \quad ; \quad g^*=\left(1+\frac{\gamma}{1-\beta}\right)v^*\end{aligned}$$

$$Y = g(H,L)\int_0^A X(i)^\gamma di \quad ; \quad g(H,L) = \left[\alpha H_1^\beta + (1-\alpha)L^\beta\right]^{\frac{1-\gamma}{\beta}}$$

$$\beta \in \left]0,1\right]$$

$$\dot{h} = \delta(1-u)h \quad ; \quad \delta = f(h) \text{ avec } \frac{\partial f}{\partial h} > 0$$

$$y = Ak^{1-\alpha}G^\alpha \text{ , } \alpha \in [0,1] \quad ; \quad \frac{\partial y}{\partial G} \geq 1 \quad ; \quad H = Ny$$

$$y = Ak\left(\frac{G}{y}\right)^\alpha \quad ; \quad Y = Ny = AK^{\frac{1}{1+\alpha}}G^{\frac{\alpha}{1+\alpha}}$$

$$g = \frac{\delta H - \Lambda\rho}{\Lambda\theta + 1}$$

$$g = \frac{2\delta H - \Lambda\rho f(T)}{1 + \Lambda\theta f(T)} \quad ; \quad f(T) = \frac{1 + (1+T)^{\frac{\alpha+\beta-1}{\alpha+\beta}}}{1 + (1+T)^{-\frac{1}{\alpha+\beta}}}$$