$$\mathbf{Y_{(t)} = K^{\alpha}_{(t)} H^{\beta}_{(t)} L^{1-\alpha-\beta}_{(t)}}, \quad \alpha + \beta \in \mathbf{(0,1)}$$

$$\begin{aligned} \dot{L}_{(t)} &= nL_{(t)} \\ L_{(0)} &> 0 \end{aligned}$$

$$\dot{k} = s_k k^{\alpha}_{(t)} h^{\beta}_{(t)} - (\delta + n) k_{(t)}$$

$$\dot{h} = s_h k^{\alpha}_{(t)} h^{\beta}_{(t)} - (\delta + n) h_{(t)}$$

$$\begin{cases} k^* = \left[\frac{s_k^{1-\beta} s_h^{\beta}}{\delta+n}\right]^{\frac{1}{1-\alpha-\beta}} \\ h^* = \left[\frac{s_h^{1-\alpha} s_k^{\alpha}}{\delta+n}\right]^{\frac{1}{1-\alpha-\beta}} \end{cases}$$

$$G(k,h) = \big(s_k k^{\alpha} h^{\beta} - (\delta+n)k \ ; \ s_h k^{\alpha} h^{\beta} - (\delta+n)h\big)$$

$$\begin{pmatrix} \dot{k} \\ \dot{h} \end{pmatrix} = G(k^*, h^*) + \mathbb{J}_G \begin{pmatrix} k - k^* \\ h - h^* \end{pmatrix} \quad \text{siendo} \quad \mathbb{J}_G = \begin{pmatrix} (\delta+n)(\alpha-1) & \frac{s_k}{s_h}\beta(\delta+n) \\ \frac{s_h}{s_k}\alpha(\delta+n) & (\delta+n)(\beta-1) \end{pmatrix}$$

$$\begin{aligned} \lambda_1 &= |(\delta+n)(\alpha+\beta-1)| < 1 \longrightarrow \text{ velocidad de convergencia} \\ \lambda_2 &= |-(\delta+n)| < 1 \end{aligned}$$

$$\begin{aligned} L_{(t+1)} &= P\left(L_{(t)}\right) \\ L_{(0)} &> 0 \end{aligned}$$

$$P(L) \geq L > 0, \ \forall L \leq L_{\infty}$$

$$\frac{P\left(L_t\right)}{L_{(t)}} \geq \frac{P\left(L_{t+1}\right)}{L_{(t+1)}},\ \forall L \leq L_\infty$$

$$\lim_{t\to+\infty} \frac{P\left(L_t\right)}{L_{(t)}} - 1 = 0$$

$$\lim_{t\to+\infty} L_t = L_\infty \ / \ L_t \leq L_\infty \ \forall \ t$$

$$Y_{(t)} = K_{(t)}^{\alpha} H_{(t)}^{\beta} L_{(t)}^{1-\alpha-\beta}, \quad \alpha+\beta \in (0,1)$$

$$k_{t+1} = \frac{s_k k_t^{\alpha} h_t^{\beta} + (1-\delta)k_t}{P(L_t)/L_t}$$

$$h_{t+1} = \frac{s_h k_t^{\alpha} h_t^{\beta} + (1-\delta)h_t}{P(L_t)/L_t}$$

$$L_{t+1} = P(L_t)$$

$$\begin{cases} k^* = \left[\frac{s_k^{1-\beta} s_h^{\beta}}{\delta}\right]^{\frac{1}{1-\alpha-\beta}} \\ h^* = \left[\frac{s_h^{1-\alpha} s_k^{\alpha}}{\delta}\right]^{\frac{1}{1-\alpha-\beta}} \\ L^* = L_\infty \end{cases}$$

$$T(k,h,L) = \left(\frac{s_k k_t^{\alpha} h_t^{\beta} + (1-\delta)k_t}{P(L_t)/L_t}\ ;\ \frac{s_h k_t^{\alpha} h_t^{\beta} + (1-\delta)h_t}{P(L_t)/L_t}\ ;\ P(L_t)\right)$$

$$\mathbb{J}_T = \begin{pmatrix} \delta(\alpha-1)+1 & \frac{\beta s_k \delta}{s_h} & k^*\left(\frac{1-P\acute{}(L_\infty)}{L_\infty}\right) \\ \frac{\alpha s_h \delta}{s_k} & \delta(\beta-1)+1 & h^*\left(\frac{1-P\acute{}(L_\infty)}{L_\infty}\right) \\ 0 & 0 & P\acute{}(L_\infty) \end{pmatrix}$$

$$\lambda_1 = \delta(\alpha + \beta - 1) < 1$$
$$\lambda_2 = 1 - \delta < 1$$
$$\lambda_3 = P\acute{}(L_\infty) < 1$$

Ley de poblacion de Verhulst (1838)

$$L_{t+1} = L_t \cdot e^{r(1-\frac{L_t}{M})}$$

Ley de poblacion de Beverton (1957)

$$L_{t+1} = \frac{aL_t}{1 + bL_t}$$

Ley de poblacion de Ricker (1954)

$$L_{t+1} = aL_t \cdot e^{-bL_t}$$

Ley de poblacion de Hassell (1975)

$$L_{t+1} = \frac{aL_t}{(1 + bL_t)^c}$$