Rigides Reales y Desempleo Keynesiano

$$\bar{P} \Rightarrow Y^d = Y^T < Y^S \Rightarrow Y^2 = F(N^T)$$

$$N^T = \frac{Y^S}{F} = F^{-1}(Y^S), \quad Y^S = Y^d$$

$$N^T = F^{-1}(Y^d)$$

$$\bar{W} = N^T < N^S$$

Modelo

$$Y^T \; C(Y^T) + I(r - \bar{\pi}) + \bar{\pi}o$$

$$L(Y^T, r) = \bar{M}/P$$

$$N^T = F^{-1}(Y^T)$$

Escanear con
Exploración rápida

$N^S > N^d = N^T \Rightarrow N^T = F^{-1}(y^S) \rightarrow N^T = F^{-1}(y^T)$

$y^S > y^d = y^T \quad ; \quad \bar{\pi} = 0 \Leftrightarrow P = \bar{P}$

$y^T = C(y^T) + I(r - \bar{\pi}) + \bar{AD}$ ... 1

$L(y^T, r) = \bar{M}/P$ ... 2

$N^T = F^{-1}(y^T)$ ... 3

Ikuan a la identidad

$y^T - C(y^T) - I(r - \bar{\pi}) - \bar{AD} = 0$

$L(y^T, r) - \bar{M}/P = 0$

$N^T - F^{-1}(y^T) = 0$

Si solo si

$y^T = y^T(\bar{AD}, \bar{\pi}, \bar{\omega}/P)$

$\bar{r} = r(\bar{AD}, \bar{\pi}, \bar{\omega}/P)$

$N^T = N^*(\bar{AD}, \bar{\pi}, \bar{\omega}/P)$

$(1 - C')\, dy^T - I'\, dr - d\bar{AD} = 0$

$L_y\, dy^T - L_i\, dr - \left(\frac{\bar{P}\, d\bar{M} - \bar{M}\, d\bar{P}}{P^2}\right) = 0$

$dN^T - (F^{-1})'\, dy^T = 0$

Ordenar

$(1-c')\,dy^T - I'dr = d\bar{A}_D$

$L_y dy^T + L_r dr = 1/P\, d\bar{\pi}$

$-(F^{-1})' dy^T + dN^T = 0$

Forma matricial

$$\begin{pmatrix} (1-c') & -I' & 0 \\ L_y & L_r & 0 \\ -(F^{-1})' & 0 & 1 \end{pmatrix} \begin{pmatrix} dy_T \\ dr \\ dN^T \end{pmatrix} = \begin{pmatrix} 1 & 0 & 0 \\ 0 & 1/P & 0 \\ 0 & 0 & 0 \end{pmatrix} \begin{pmatrix} d\bar{A}_D \\ d\bar{\pi} \\ d\bar{\omega}/P \end{pmatrix}$$

Metodo de Cramer

$$\Delta = \begin{vmatrix} 1-c' & -I' & 0 \\ L_y & L_r & 0 \\ -(F^{-1})' & 0 & 1 \end{vmatrix} =$$

$$\Delta = \begin{vmatrix} 1-c' & -I' \\ L_y & L_r \end{vmatrix}$$

$$\Delta = \underbrace{\underbrace{(1-c')}_{(+)}\underbrace{(L_r)}_{(-)}}_{(-)} + \underbrace{\underbrace{L_r}_{(-)} \cdot \underbrace{I'}_{(-)}}_{(-)} \quad (-)$$

$\therefore\ \Delta < 0$

$d\bar{M} \neq 0 \quad , d\bar{AD} = 0, d(\omega/P) = 0$

$$\begin{bmatrix} 1-c' & -I' & 0 \\ L_Y & L_r & 0 \\ -(F^{-1}) & 0 & 1 \end{bmatrix} \begin{bmatrix} dY^T \\ dr \\ dN^T \end{bmatrix} = \begin{bmatrix} 1 & 0 & 0 \\ 0 & 1/P & 0 \\ 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} 0 \\ 1/P \\ 0 \end{bmatrix}$$

$$\begin{bmatrix} 1-c' & -I' & 0 \\ L_Y & L_r & 0 \\ -(F^{-1}) & 0 & 1 \end{bmatrix} \begin{bmatrix} dY^T/d\bar{M} \\ dr/d\bar{M} \\ dN^T/d\bar{M} \end{bmatrix} = \begin{bmatrix} 0 \\ 1/\bar{P} \\ 0 \end{bmatrix}$$

$$\frac{dr}{d\bar{M}} = \frac{\begin{vmatrix} 1-c' & 0 & 0 \\ L_Y & 1/\bar{P} & 1 \\ -(F^{-1}) & 0 & 0 \end{vmatrix}}{\Delta}$$

$$\frac{dr}{d\bar{M}} \quad \frac{\begin{vmatrix} 1-c' & 0 \\ L_Y & 1/\bar{P} \end{vmatrix}}{\Delta}$$

$$\frac{(1-c')(1/\bar{P}) - 0}{\Delta} = \frac{+}{-}$$

$$\therefore \quad \frac{dr}{d\bar{M}} < 0 \quad \Big\} \quad \uparrow \bar{M} = \downarrow r$$

$$\frac{dy^T}{d\bar{\pi}} = ? \qquad d\bar{\pi} \neq 0 \quad dA_0 = d\frac{\omega}{P} = 0$$

$$\frac{dy^T}{d\bar{\pi}} = \frac{\begin{vmatrix} 0 & -I' & 0 \\ 1/P & L_r & 0 \\ 0 & 0 & 1 \end{vmatrix}}{\Delta} = \frac{\begin{vmatrix} 0 & -I' \\ 1/P & L_r \end{vmatrix}}{\Delta} = \frac{\overset{+}{\frac{1}{P}} \cdot \overset{(-)}{I'}}{\Delta} = \frac{(-)}{(-)} > 0$$

$$\therefore \frac{dy^T}{d\bar{\pi}} > 0 \Rightarrow \uparrow\bar{\pi} \ \uparrow y^T$$

$$\frac{dN^T}{d\bar{\pi}} = \frac{\begin{vmatrix} 1-c & -I' & 0 \\ L_y & L_r & 1/P \\ -(F^{-1})' & 0 & 0 \end{vmatrix}}{\Delta} = \frac{-(F^{-1})' \begin{vmatrix} -I' & 0 \\ L_r & 1/P \end{vmatrix}}{\Delta} = \frac{+(F^{-1})' \cdot \frac{1}{P} \cdot \overset{(-)}{I'}}{\Delta} = \frac{-}{-} > 0$$

$$\therefore \frac{dN^T}{d\bar{\pi}} > 0$$

$$dA_0 \neq 0 \quad d\bar{\pi} = d\left(\frac{\omega}{P}\right) = 0$$

$$\begin{bmatrix} (1-c') & -I' & 0 \\ L_y & L_r & 0 \\ -(F^{-1})' & 0 & 1 \end{bmatrix} \begin{bmatrix} dy^T/dA_0 \\ di/dA_0 \\ dN^T/dA_0 \end{bmatrix} = \begin{bmatrix} 1 \\ 0 \\ 0 \end{bmatrix}$$

$$\frac{dy^T}{dA_0} = \frac{\begin{vmatrix} 1 & -I' & 0 \\ 0 & L_r & 0 \\ 0 & 0 & 1 \end{vmatrix}}{\Delta} = \frac{\begin{vmatrix} L_r & 0 \\ 0 & 1 \end{vmatrix}}{\Delta} = \frac{-\overset{(+)}{L_r}}{\Delta} = \frac{+}{-} < 0$$

$$\therefore \frac{dy^T}{dA_0} < 0$$

$$\frac{dr^T}{dA_D} = \frac{\begin{vmatrix} 1-c' & 1 & 0 \\ L_y & 0 & 0 \\ -(F-1)' & 0 & \beta \end{vmatrix}}{\Delta} = \frac{\begin{vmatrix} 1-c' & 1 \\ L_r & 0 \end{vmatrix}}{\Delta} = \frac{\overset{(-)}{L_r}}{\Delta} = \frac{-}{(-)} = (+)$$

$$\therefore \quad \frac{dr}{dA_D} > 0$$

$$\frac{dN^T}{dA_D} = \frac{\begin{vmatrix} 1-c_1 & -S_r & \boxed{\,} \\ L_y & L_r & 0 \\ -(F-1)' & 0 & 0 \end{vmatrix}}{\Delta} = \frac{\begin{vmatrix} L_y & L_r \\ -(F-1)' & 0 \end{vmatrix}}{\Delta} = \frac{(F-1)'\overset{-}{L_r}}{\Delta} = \frac{(-)}{(-)} > 0$$

$$\frac{dN^T}{dA_D} > 0$$

$$d(\overline{\omega}/P) \neq 0 \qquad d\overline{r} = d\overline{A_D} = 0$$

$$\begin{vmatrix} 1-c' & -S' & 0 \\ L_y & L_r & 0 \\ -(F-1)' & 0 & 1 \end{vmatrix} \begin{bmatrix} dy^T/d(\overline{\omega}/P) \\ dr/d(\overline{\omega}/P) \\ dN^T/d(\overline{\omega}/P) \end{bmatrix} = \begin{bmatrix} 0 \\ 0 \\ 0 \end{bmatrix}$$

$$\frac{dy^T}{d(\overline{\omega}/P)} = \frac{\begin{vmatrix} 0 & -S_r & 0 \\ 0 & L_r & 0 \\ 0 & 0 & 1 \end{vmatrix}}{\Delta} = \frac{0}{\Delta} = 0 \quad \therefore \frac{dy^T}{d(\overline{\omega}/P)} = \text{no tiene efectos}$$

$$\frac{dr}{d(\omega/P)} = \frac{\begin{vmatrix} 1-c' & 0 & 0 \\ L_y & 0 & 0 \\ -(F-1)' & 0 & 1 \end{vmatrix}}{\Delta} = \frac{0}{\Delta} = 0 \qquad \therefore \frac{dr}{d(\overline{\omega}/P)} = 0$$

$$\frac{dNT}{d(\omega/P)} = \frac{\begin{vmatrix} 1-c & -I' & 0 \\ L_Y & L_r & 0 \\ -(f-1)^{*} & 0 & 0 \end{vmatrix}}{\Delta} = \frac{0}{\Delta} = 0$$