Modelo Clasico

Equilibrio general

$$y^d = y^s = y^T$$
$$M^d = M^s$$
$$N^d = N^s$$

$$y^T = C(y^T) + I(r-\bar{\pi}) + \bar{AD} \quad \text{- - - - (1)}$$
$$L(y^T, r) = \bar{M}/P \quad \text{- - - - (2)}$$
$$N^T = N^d(w/P) \quad \text{- - - - (3)}$$
$$N^T = N^s(w/P) \quad \text{- - - - (4)}$$
$$y^T = F(N^T) \quad \text{- - - - (5)}$$

$$N^{d\prime} < 0 \qquad N^{s\prime} > 0, \; I' < 0$$

ident.

$$y^T - C(y^T) + I(r-\pi) - \bar{AD} \equiv 0$$
$$L(y^T, r) - \bar{M}/P \equiv 0$$
$$N^T - N^d(w/P) \equiv 0$$
$$N^T - N^s(w/P) \equiv 0$$
$$y^T - F(N^T) \equiv 0$$

si solo si

$$\bar{y}^T = y^T(AD, \bar{M}, \bar{\pi})$$
$$\bar{r} = r(AD, \bar{M}, \bar{\pi})$$
$$N^T = N^T(AD, \bar{M}, \bar{\pi})$$
$$(w/P) = w/P(AD, \bar{M}, \bar{\pi})$$
$$\bar{P} = P(AD, \bar{M}, \bar{\pi})$$

Ordenando

$$(1-C')\,dy^T - I\,dr = d\bar{AD} - I'\,d\bar{\pi}$$
$$L_y\,dy^T + L_r\,dr + \bar{M}/P^2\,dP = M/P\,d\bar{\pi}$$
$$dN^T - N^{d\prime}\,d(w/P) = 0$$
$$dN^T - N^{s\prime}\,d(w/P) = 0$$
$$dy^T - F'\,dN^T = 0$$

alpha

Escanear con
Exploración rápida

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

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

$N^T = N^d(w/p)$ ...... (3)

$N^T = N^s(w/p)$ ...... (4)

$y^T = F(N^T)$ ...... (5)

ident

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

$\frac{\bar{M}}{P} - L(y^T, r) = 0$ $\qquad \bar{r} = r(AD, \bar{M}, \bar{\pi})$

$N^T - N^d(w/p) = 0$ $\qquad \bar{N}^T = N^T(\bar{AD}, \bar{M}, \bar{\pi})$

$N^T - N^s(w/p) = 0$ $\qquad w/p = w/p(\bar{AD}, \bar{M}, \bar{\pi})$

$y^T - F(N^T) = 0$ $\qquad \bar{P} = P(\bar{AD}, \bar{M}, \bar{\pi})$

aplicamos dif total

$dy^T - C_y dy^T - I_r dr + I_{\bar{\pi}} d\bar{\pi} - d\bar{AD}$

$\frac{1}{P} d\bar{M} - \frac{M dp}{p^2} \neq 0 - L_y dy - L_r dr = 0$

$dN^T - N^{d\prime} d(wp) = 0$ $\qquad F_N = F'$

$dN^t - N^{s\prime} d(wp) = 0$

$dy^t - F'(dN^t) = 0$

despejando exogenas

$dy^t - C_y dy^t - I_r dr = d\bar{AD} - I_{\pi} d\bar{\pi}$

$dN^t - N^{d\prime} d(w/p) = 0$

$dN^t - N^{s\prime} d(w/p) = 0$

$dy^t - F'(dN^t) = 0$

matrices

$$
\begin{array}{ccccc}
dy & dr & dN, & dw/p, & dp
\end{array}
$$

$$
\begin{bmatrix}
(1-cy) & -I_r & 0 & 0 & 0 \\
-L_y & -L_r & 0 & 0 & -\frac{M}{p^2} \\
0 & 0 & 1 & -N^{d'} & \\
0 & 0 & 1 & -N^{s'} & 0 \\
1 & 0 & -F' & 0 & 0
\end{bmatrix}
\begin{bmatrix}
dy \\ dr \\ dN \\ d(w/p) \\ dp
\end{bmatrix}
=
\begin{array}{c}
\begin{array}{ccc} \Delta D & \bar{M} & \bar{\pi} \end{array} \\
\begin{bmatrix}
1 & 0 & I_\pi \\
0 & \frac{1}{p} & 0 \\
 & & \\
 & & \\
 & &
\end{bmatrix}
\end{array}
\begin{bmatrix}
\Delta D \\ d\bar{M} \\ d\bar{\pi}
\end{bmatrix}
$$

Determinante

$$
\begin{vmatrix}
(1-c) & -I_r & 0 & 0 \\
-0 & 0 & 1 & -N^{d'} \\
0 & 0 & 1 & N^{s'} \\
1 & 0 & -F' & 0
\end{vmatrix}
= \frac{M}{p} \cdot I_r
\begin{vmatrix}
0 & 1 & -N^{d'} \\
0 & 1 & -N^{s'} \\
1 & -F' & 0
\end{vmatrix}
$$

$$
\Delta = \overset{(+)}{\frac{\bar{M}}{p}} \cdot I_r \left[\underbrace{\overset{(+)}{-N^{s'}} + \overset{(-)}{N^{d'}}}_{(-)} \right]
$$

$(-)$

$(+)$

$N^{d'} < 0$

$N^{s'} > 0$

$\Delta > 0$

Forma matricial

$$\begin{bmatrix} (1-C') & -I' & 0 & 0 & 0 \\ Ly & Lr & 0 & 0 & \bar{M}/P^2 \\ 0 & 0 & 1 & -N^{d'} & 0 \\ 0 & 0 & 1 & -N^{s'} & 0 \\ 1 & 0 & -F' & 0 & 0 \end{bmatrix} \begin{bmatrix} dy_T \\ dr \\ dN^T \\ d(w/P) \\ dP \end{bmatrix} = \begin{bmatrix} 1 & -I & 0 \\ 0 & 0 & 1/P \\ 0 & 0 & 0 \\ 0 & 0 & 0 \\ 0 & 0 & 0 \end{bmatrix} \begin{bmatrix} d\bar{A}_0 \\ d\bar{\pi} \\ d\bar{m} \end{bmatrix}$$

Metodo cramer

$$\Delta = \begin{vmatrix} (1-C') & -I' & 0 & 0 & 0 \\ Ly & Lr & 0 & 0 & \bar{M}/P^2 \\ 0 & 0 & 1 & -N^{d'} & 0 \\ 0 & 0 & 1 & -N^{s'} & 0 \\ 1 & 0 & -F' & 0 & 0 \end{vmatrix} = \frac{-\bar{M}}{P^2} \begin{vmatrix} (1-C') & -I' & 0 & 0 \\ 0 & 0 & 1 & -N^{d'} \\ 0 & 0 & 1 & -N^{s'} \\ 1 & 0 & -F' & 0 \end{vmatrix}$$

$$\Delta = \frac{-\bar{M}}{P^2} - I' \begin{vmatrix} 0 & 1 & -N^{d'} \\ 0 & 1 & -N^{s'} \\ 1 & -F' & 0 \end{vmatrix}$$

$$\Delta = \frac{-\bar{M}}{P^2} \cdot -I' \begin{vmatrix} 1 & -N^{d'} \\ 1 & -N^{s'} \end{vmatrix}$$

$$\Delta = \underset{(+)}{\frac{-\bar{M}}{P^2}} \cdot \overset{(-)}{I'} \underset{\underset{(-)}{(-)}}{(\overset{(-)}{N^{d'}} - \overset{(+)}{N^{s'}})}$$

$(-)$

$\therefore \Delta < 0$