

MO equations

EQUATION.DOC 29 May, 2015

Household demand

No

$$(5.8) \quad x_{(is)3} = \varepsilon_{(is)} C + \sum_{q=1}^2 \sum_{r=1}^2 \eta_{(is)(qr)} p_{(qr)} , \quad i,s=1,2 \quad 4$$

$$\text{Or} \quad x_{(is)3} = c_R - (p_{(is)} - \sum_r \alpha_{(ir)3} p_{(ir)})$$

Exports

$$(5.19) \quad p_{(i1)}^* = -\gamma_i x_{(i1)4} + f_{(i1)4} , \quad i=1,2 \quad 2$$

Commodity outputs

$$(5.29) \quad y_{(i1)j} = z_j + \left(p_{(i1)} - \sum_{q=1}^2 R_{(ql)j} p_{(q1)} \right) , \quad j, i=1,2 \quad 4$$

Input demands

$$(5.33) \quad \left\{ \begin{array}{l} x_{(is)j} = z_j - (p_{(is)} - \sum_{r=1}^2 a_{(ir)j} p_{(ir)}) , \quad i,s=1,2 \\ x_{(31)j} = z_j - [p_{(31)} - (a_{(31)j} p_{31} + a_{(32)j} p_{(32)j})] \\ x_{(32)j} = z_j - [p_{(32)j} - (a_{(31)j} p_{31} + a_{(32)j} p_{(32)j})] \end{array} \right\} \quad j=1,2 \quad 12$$

Zero pure profits

$$(5.41) \quad \sum_{i=1}^2 R_{(i1)j} p_{(i1)} = S_{(31)j} p_{(31)} + S_{(32)j} p_{(32)j} + \sum_{i=1}^2 \sum_{j=1}^2 S_{(is)j} p_{(is)} , \quad j=1,2 \quad 2$$

$$(5.42) \quad p_{(i1)}^* + v_i + \phi = p_{(i1)} , \quad i=1,2 \quad 2$$

$$(5.43) \quad p_{(i2)}^* + t_i + \phi = p_{(i2)} , \quad i=1,2 \quad 2$$

Market clearing

$$(5.45) \quad \sum_{j=1}^2 Q_{(i1)j} y_{(i1)j} = \sum_{j=1}^4 W_{(i1)j} x_{(i1)j}, \quad i=1,2 \quad 2$$

$$(5.48) \quad \begin{cases} \sum_{j=1}^2 W_{(31)j} x_{(31)j} = \ell & 1 \\ x_{(32)j} = k_j, \quad j=1,2 & 2 \end{cases}$$

Trade aggregates

$$(5.55) \quad m = \sum_{i=1}^2 N_{(i2)} \left(p_{(i2)}^* + \sum_{j=1}^3 W_{(i2)j} x_{(i2)j} \right) \quad 1$$

$$(5.56) \quad e = \sum_{i=1}^2 N_{(i1)} (p_{(i1)}^* + x_{(i1)4}) \quad 1$$

$$(5.57) \quad \Delta B = (Ee - Mm)/100 \quad 1$$

CPI

$$(5.58) \quad cpi = \sum_{i=1}^2 \sum_{s=1}^2 S_{(is)3} p_{(is)} \quad 1$$

Wage indexation

$$(5.59) \quad p_{(31)} = h(cpi) + f_{(31)} \quad 1$$

Aggregate consumption

$$(5.60) \quad c_R = c - cpi \quad 1$$

Total 39