Generated on 2018-03-11 11:49:22 by gEcon version 1.1.0 (2018-03-11)
Model name: pure_exchange

1 AGENT A

1.1 Optimisation problem

$$\max_{C^{A1}, C^{A2}} U^A = \log C^{A1} + \psi^A \log C^{A2} \tag{1.1}$$

s.t. :

$$p^1 C^{A1} + p^2 C^{A2} = e^{A1} p^1 + e^{A2} p^2 \quad \left(\lambda^{\mathrm{AGENT}^{A^1}} \right) \tag{1.2}$$

1.2 Identities

$$e^{A1} = e^{A1^{\mathrm{calibr}}} \tag{1.3}$$

$$e^{A2} = e^{A2^{\mathrm{calibr}}} \tag{1.4}$$

1.3 First order conditions

$$C^{A1^{-1}} - \lambda^{\mathrm{AGENT}^{A^1}} p^1 = 0 \quad \left(C^{A1} \right) \tag{1.5}$$

$$\psi^A C^{A2^{-1}} - \lambda^{\mathrm{AGENT}^{A^1}} p^2 = 0 \quad \left(C^{A2} \right) \tag{1.6}$$

2 AGENT B

2.1 Optimisation problem

$$\max_{C^{B1}, C^{B2}} U^B = \log C^{B1} + \psi^B \log C^{B2} \tag{2.1}$$

s.t. :

$$p^1 C^{B1} + p^2 C^{B2} = e^{B1} p^1 + e^{B2} p^2 \quad \left(\lambda^{\mathrm{AGENT}^{B^1}} \right) \tag{2.2}$$

2.2 Identities

$$e^{B1} = e^{B1^{\mathrm{calibr}}} \tag{2.3}$$

$$e^{B2} = e^{B2^{\mathrm{calibr}}} \tag{2.4}$$

2.3 First order conditions

$$C^{B1^{-1}} - \lambda^{\mathrm{AGENT}^{B^1}} p^1 = 0 \quad \left(C^{B1} \right) \tag{2.5}$$

$$\psi^B C^{B2^{-1}} - \lambda^{\mathrm{AGENT}^{B^1}} p^2 = 0 \quad \left(C^{B2} \right) \tag{2.6}$$

3 EQUILIBRIUM

3.1 Identities

$$p^1 = 1 \tag{3.1}$$

$$C^{A1} + C^{B1} = e^{B1} + e^{A1} \tag{3.2}$$

4 Equilibrium relationships (after reduction)

$$\psi^{\mathrm{A}}C^{\mathrm{A2}^{-1}} - p^2 \left(e^{\mathrm{A1}^{\mathrm{calibr}}} + e^{\mathrm{B1}^{\mathrm{calibr}}} - C^{\mathrm{B1}}\right)^{-1} = 0 \tag{4.1}$$

$$\psi^{\mathrm{B}}C^{\mathrm{B2}^{-1}} - p^2 C^{\mathrm{B1}^{-1}} = 0 \tag{4.2}$$

$$U^{\mathrm{A}} - \log\left(e^{\mathrm{A1}^{\mathrm{calibr}}} + e^{\mathrm{B1}^{\mathrm{calibr}}} - C^{\mathrm{B1}}\right) - \psi^{\mathrm{A}}\log C^{\mathrm{A2}} = 0 \tag{4.3}$$

$$U^{\mathrm{B}} - \log C^{\mathrm{B1}} - \psi^{\mathrm{B}}\log C^{\mathrm{B2}} = 0 \tag{4.4}$$

$$-e^{\mathrm{B1}^{\mathrm{calibr}}} + C^{\mathrm{B1}} + e^{\mathrm{A2}^{\mathrm{calibr}}}p^2 - p^2 C^{\mathrm{A2}} = 0 \tag{4.5}$$

$$e^{\mathrm{B1}^{\mathrm{calibr}}} - C^{\mathrm{B1}} + e^{\mathrm{B2}^{\mathrm{calibr}}}p^2 - p^2 C^{\mathrm{B2}} = 0 \tag{4.6}$$

5 Parameter settings

$$\psi^{\mathrm{A}} = 1.72 \tag{5.1}$$

$$\psi^{\mathrm{B}} = 2.22 \tag{5.2}$$

6 Equilibrium values

	Equilibrium value
p^2	2.0362
C^{A2}	0.6211
C^{B1}	1.2647
C^{B2}	1.3789
U^{A}	-1.1266
U^{B}	0.9481