11/12/19

3 grups

G1 – neix en t
G2 – neix en t+1
G3 – neix en t+2

3 períodes de vida

$u_i = c_i \cdot c_i'$
$u_i' = c_i' \cdot c_i''$
$u_i'' = c_i''$

Materia dotació: (0, 1, 0)

- $\max u = c \cdot c'$
  s.a $\begin{cases} c + l = 0 \\ c' + l' = Rl + 1 \end{cases}$

- $\max u' = c' \cdot c''$
  s.a $\begin{cases} c' + l' = Rl + 1 \\ c'' = R'l' \end{cases}$

$\max_{l'} u' = (1 + Rl - l')(R'l')$

$0 = \frac{du'}{dl'} = R'(1 + Rl) - 2R'l'$

$l' = \frac{1 + Rl}{2}$

$c' = \frac{1 + Rl}{2}$

$c'' = \frac{R'(1 + Rl)}{2}$

$\max_{l} u = -l \cdot \left(\frac{1 + Rl}{2}\right)$

$0 = \frac{du}{dl} = -\frac{1}{2} - \frac{2Rl}{2} = 0$

$l = -\frac{1}{2R}$

$c = \frac{1}{2R}$

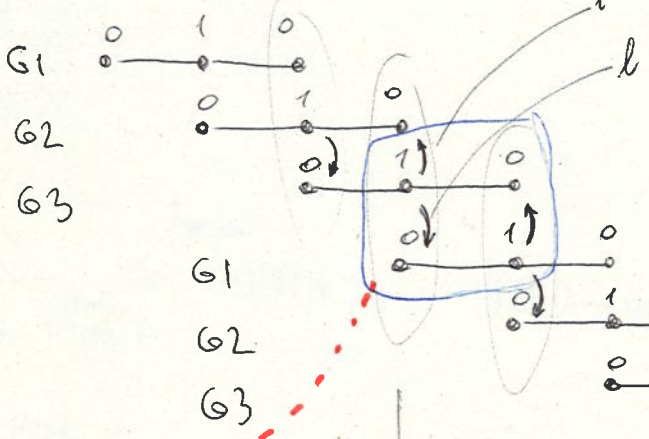
$l' = \frac{1 + R \cdot \left(-\frac{1}{2R}\right)}{2} = \frac{1}{4}$

$c' = \frac{1 + R \cdot \left(-\frac{1}{2R}\right)}{2} = \frac{1}{4}$

$c'' = \frac{R'}{4}$

mercat preus

$\begin{cases} l' + l = 0 \\ \frac{1}{4} - \frac{1}{2R} = 0 \end{cases} \rightarrow R = 2$



$\frac{1 + Rl}{2} = \frac{1}{2R}$ $\quad l' + l = 0$

$\frac{1}{4} + \frac{1}{2R} = 0$

matèixa estructura cada període

Si només participen en el mercat ajust dels en equilibri:

$c_1 + c_3' = 1$

$\frac{1}{2R} + \frac{1}{4} = 1 \rightarrow \frac{1}{2R} = \frac{3}{4}$

$R = 2/3$

mercat béns

$c_1'' + c_2' + c_3 = 1$
$c_2'' + c_3' + c_4 = 1$
$c_3'' + c_4' + c_4 = 1$

per simetria de G1, G2, G3:

$c_1 = c_2 = c_3$
$c_1' = c_2' = c_3'$
$c_1'' = c_2'' = c_3''$

$c_1'' + c_2' + c_3 = 1$

$\frac{R'}{4} + \frac{1}{4} + \frac{1}{2R} = 1$

si $R = R'$: $R^2 - 3R + 2 = 0$

$R = \frac{3 \pm \sqrt{9 - 8}}{2} \begin{cases} 2 \\ 1 \end{cases}$

$R'R - 3R + 2 = 0$

$R = 2 \begin{cases} c = 1/4 \\ c' = 1/4 \\ c'' = 1/2 \end{cases}$ $\quad R = 1 \begin{cases} c = 1/2 \\ c' = 1/4 \\ c'' = 1/4 \end{cases}$