(c_1, c_2)

$(y - c_1)$

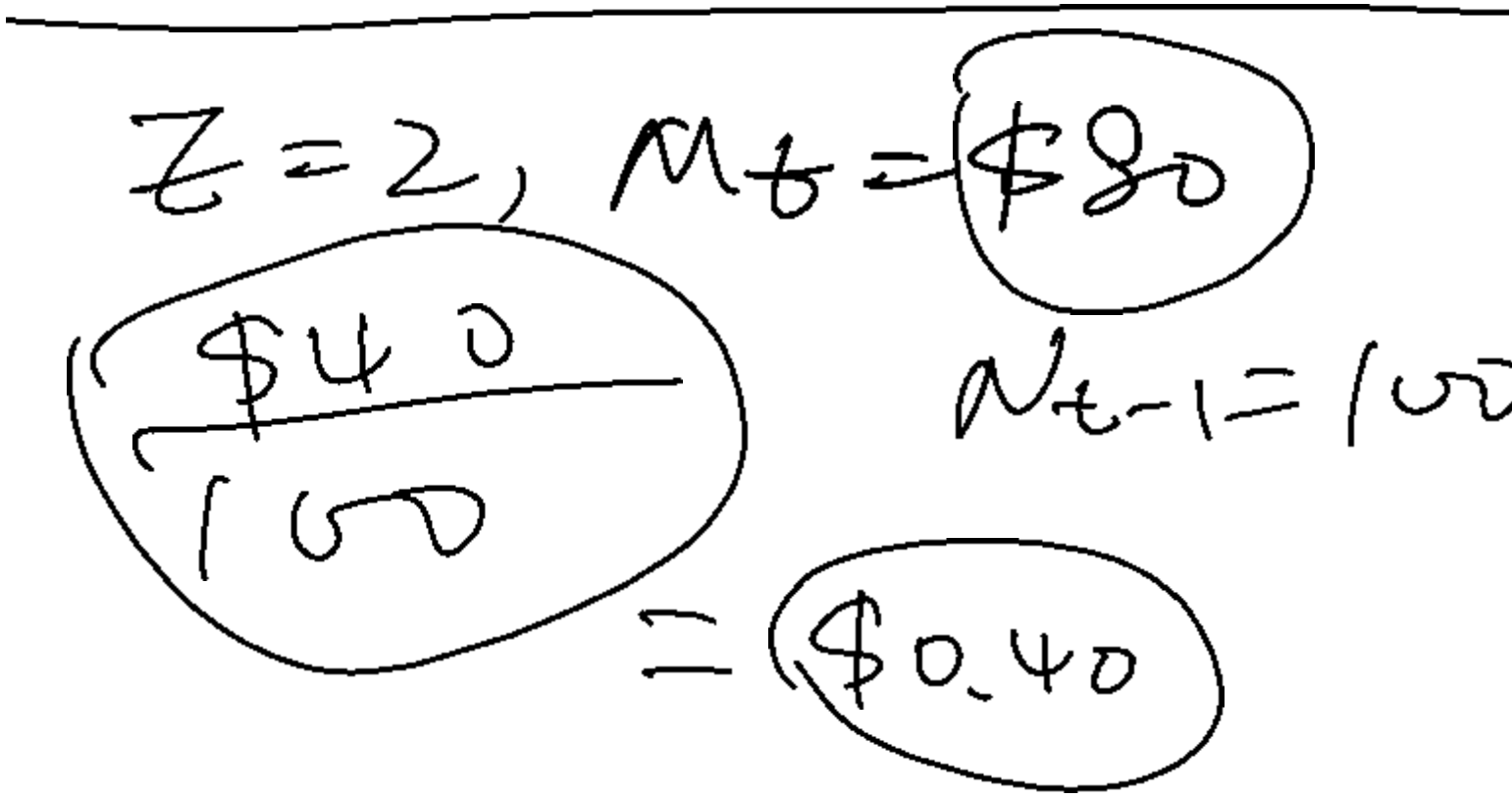
$M_t = \$10, p_t = \$2$

$c_{2,t} = 5b$

$M_t' = \$15, p_t' = \$3$

$c_{2,t}' = 5b$

Is the Monetary eqm efficient?



$V_t = 5b/\$ \rightarrow$

$P_t = \$0.20/b$

$a_t = 2b$

$V_{t+1} = \Delta M_{t+1}(y - c_1)$

$\frac{V_{t+1}}{V_t} = \frac{\Delta M_{t+1}(y - c_1)/M_{t+1}}{\Delta M_t(y - c_1)/M_t}$

$= \frac{M_t}{M_{t+1}} = \frac{1}{2}$

$$z = 1.1 \quad , \quad \frac{1}{z} = 0.9$$

$$1 - \frac{1}{z} \approx 0.1$$

$$\max_{c_1, c_2} \quad u(c_1, c_2)$$

$$s.t. \quad c_1 + 2c_2 = \quad$$

$$y + 2a$$

$$\begin{cases} c_1 = y + 2a \\ c_2 = 0 \end{cases}$$

X eqm

N.y

Monetary eqm

is a C.E the following

3 condⁿ are satisfied

1. Max u s.t. life time b.c

2. prices
(Vt)

3. mkts clear

(1) goods mkt → Vt

(2) money mkt

③ govt b.c. balanced

↳ At

$$\max C_1 \cdot C_2$$

s.t. $C_1 + rC_2 \leq y + rA$

---

b.c. $\rightarrow C_1 = y + rA - rC_2$

s.t. objective fn

$$\max_{C_2} \left(y + rA - r(2)\right) \cdot C_2$$

For wrt C_2

$$C_2 \cdot (-2) + (y + 2a - 2C_2) = 0$$

$$\begin{cases} C_2 = \dfrac{y + 2a}{2} \\ C_1 = \dfrac{y + 2a}{2} \end{cases}$$

$z = 2$,

$$\begin{cases} C_1^* = \dfrac{2y}{3} \\ C_2^* = \dfrac{y}{3} \end{cases}$$

$z = 1$,

$$\begin{cases} C_1^* = \dfrac{y}{2} \\ C_2^* = \dfrac{y}{2} \end{cases}$$

$U = C_1 \cdot C_2$

$z=2,\ U = \frac{2y^2}{9} = \frac{8y^2}{36}$

$z=1,\ U = \frac{y}{2} \cdot \frac{y}{2} = \frac{y^2}{4} = \frac{9y^2}{36}$

C.E. $z=1$

P.O. $z=1$

P.O. $z=2$

Why C.E. must be on the intersection of the b.c. & the R.C.

$V + MA = N \cdot (y - C_{100})$

$V_t M_t = N_{t-1} \cdot C_2$ ②

$N \cdot C_2 + N \cdot C_1 = N \cdot y$

$C_1 + C_2 = y$ → R.C.

$n = 2$

period 6 ← 5 old

10 young

young gives 1 unit of good → old people → each old will receive 2 apples

Social planner

supreot R.C. $n = 2$

slope of b.c. $\frac{n}{2} = \frac{V_{t+1}}{V_t}$

$\frac{P_t}{P_{t+1}} = \frac{V_{t+1}}{V_t} = 2$

price ↓ by 50%

Money supply ↓ by 50%

1 unit of good this good → $1

$1 → 2 units of goods

$W_{t-1} \cdot a_t = (1 - \frac{1}{2}) V_t M_t$

→ old

→ GX

Assignment Project Exam Help

$U(C_1, C_2)$

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