Comments on Green-Zhou "Money as Mechanism in a Bewley Economy"

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The Model

dynamic pure exchange continuum economy with no aggregate risk

individuals face private iid shocks θ_{it}

perishable endowment $e(\theta)$, utility $u(c,\theta)$, discount factor β

a single consumption good

z_{it} delivered to planner

$m_{it} \in \Re$ message sent to planner

$w_{it} \in \Re$ information available to planner about i

note one dimensional nature of message and planner information

essentially forces "one kind of money"

cannot address the question – could we do significantly better by using two kinds of money; or money and some other type of credit mechanism?

y_{it} delivery from planner to trader

traders do not observe deliveries between other traders and planner

laissez faire monetary mechanism

competitive mechanism with fiat money/trading post

basic pricing mechanism: price is nominal demand divided by real supply

$$p_t = \int m_i d\mu \Big/ \int z_t d\mu$$

wealth and consumption are augmented accordingly

$$y_{it} = m_{it} / p_{it}$$

$$w_{it} = w_{it-1} + p_t(z_{it} - y_{it})$$

expansionary/contractionary mechanisms:

nominal money balances inflate/deflate at constant rate with **equal per capita lump sum seignorage distribution**

Equilibrium

symmetric stationary Markov

existence in laissez faire monetary case

showing that the solution to the "one-person free storage" problem is isomorphic to an equibrium [note absence of aggregate shocks]

near efficiency

means "nearly first best in per period consumption units"

note some problematic aspects of using "efficiency" in this mechanism design setting

as $\beta \to 1$ "near efficiency" [permanent income hypothesis]

example 6.1: nonmonetary dominates laissez faire monetary

locally linear preferences with satiation

two state 50-50

first best: satiate high marginal utility people, give rest to low marginal utility

improved on by having zero money low MU give small amount to zero money high MU

[follows from existence of zero money high MU types]

question: is this impossible with expansionary monetary?

example 6.2: expansionary dominate laissez faire monetary

same as previous example, but non-binding satiation

locally linearity gives expansionary first best

[pareto improvement on laissez faire is more robust – doesn't require linearity]

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