Two Papers About the MPC!



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Chris Carroll These are my views and not those of anybody else at CFPB

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Big negative shocks to income



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 - If $\kappa = 0.05$ then multiplier is only pprox 0.05
 - 2007-vintage DSGE models mostly implied $\kappa \in (0.00, 0.05)$



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$$y_t = p_t + \Theta_t$$

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$0 < \hat{\alpha} < 1$:



$0 < \hat{\alpha} < 1$:



$0 < \hat{\alpha} < 1$: Not Exactly a Triumph

Problem:

- Friedman's PIH is not really about r



Standard Theory About Response to r ...

If $u(c) = (1 - \gamma)^{-1}c^{1-\gamma}$, and r is believed to be constant forever, then perfect foresight infinite horizon model PerfForesightCRRA says

$$c = \underbrace{\left(b_t + p\left(\frac{1+r}{r}\right)\right)}_{o} \underbrace{\left(r - \gamma^{-1}(r-\vartheta)\right)}^{\kappa}$$



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$$c = \underbrace{\left(b_t + p\left(\frac{1+r}{r}\right)\right)}_{o} \underbrace{\left(r - \gamma^{-1}(r-9)\right)}_{K}$$
$$= OK$$

where o is 'overall wealth' (human plus nonhuman), and $o\kappa$ is the amount that the model says is OK to spend (!)



Unanticipated Permanent Change In r

$$c_t = \left(r - \gamma^{-1}(r - \vartheta)\right) \left(b_t + p\left(\frac{1+r}{r}\right)\right)$$

Three effects:

• Income Effect (assume $\gamma^{-1} = 0$ and p = 0):

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• Human Wealth Effect ($p \neq 0$, r_t and r_{t+1} small)

$$\Delta c_{t+1} \approx (1/r_{t+1} - 1/r_t) p \kappa_t$$

= $(r_t/r_{t+1} - 1) (\kappa_t/r_t) p$



Sizes? Depends ...

Simple calibration: $b_t = p = 1$, $r_t = 0.06$, $r_{t+1} = 9 = 0.03$

	Effect Size		
γ	Income-And-Subst	Human Wealth	$\Delta c_{t+1}/\Delta y_{t+1}$
8	0.03	1.0	1.03/0.03 ≈ 30
1	0	1.0	1.0/0.03 ≈ 30

So, now, one theory/calibration or another can accommodate any $0 < \alpha < 30$.



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Definitely not rejected!



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Consumer Financia Protection Bureau

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Any of these differences could make *huge* difference for behavior

From Keyes et al:



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- ∃ people for whom extra income from ARM resets in 2009-2010 will lead to some *c* and some deleveraging
- Little progress has been made on 'What will the MPC be out of stimulus payments?'



Two views:

LATE/Natural Experiment/Micro Crowd:



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 - That's all we can do.



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- LATE/Natural Experiment/Micro Crowd:
 - That's all we can do.
- Me: No! Use data and results to calibrate a theory
 - IF data line up reasonably with theory, maybe we learned something





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• Within person over time:



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 - Dummies maybe control for levels but not patterns of behavior



Example Of Puzzle That Isn't

At a couple of places, some confusion about apparent contradiction:

Low wealth borrowers have a higher MPC



Example Of Puzzle That Isn't

At a couple of places, some confusion about apparent contradiction:

- Low wealth borrowers have a higher MPC
- Low wealth borrowers deleverage more



A Wealth Shock



cfpb Consumer Financial Protection Bureau

Another Puzzle That Isn't

Sometimes low wealth borrowers deleverage more


Another Puzzle That Isn't

- Sometimes low wealth borrowers deleverage more
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Differences Across Households In Time Preference





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- This DOES reject a theory: RBC at local level



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- ⇒ Use for calibrating theories



Milton A. Friedman. *A Theory of the Consumption Function*. Princeton University Press, 1957.

