

Discussion of “Can HA Cure NK Puzzles: A Catch-22?” by Florin Bilbiie

Alistair Macaulay

Oxford–Indiana Macroeconomic Policy Conference
10th July 2018

This paper

Several recent papers tell us that Hand-to-Mouth households amplify the effects of policy.

What conditions do we need to fulfil to get this result? (NK-cross paper)

Does meeting these conditions have side-effects?

- ▶ Yes - aggravates NK puzzles, creates a few more.

Amplification

Do hand to mouth households amplify policy, or dampen?

$$\frac{dc_t}{dr_t} = \lambda \underbrace{\frac{dc_t^H}{dr_t}}_{?} + (1 - \lambda) \underbrace{\frac{dc_t^S}{dr_t}}_{\text{EIS}}$$

Condition for HtM to amplify: $\frac{dc_t^H}{dr_t} > \frac{dc_t^S}{dr_t} \iff \chi > 1$

Amplification

Do hand to mouth households amplify policy, or dampen?

$$\frac{dc_t}{dr_t} = \lambda \underbrace{\frac{dc_t^H}{dr_t}}_{?} + (1 - \lambda) \underbrace{\frac{dc_t^S}{dr_t}}_{\text{EIS}}$$

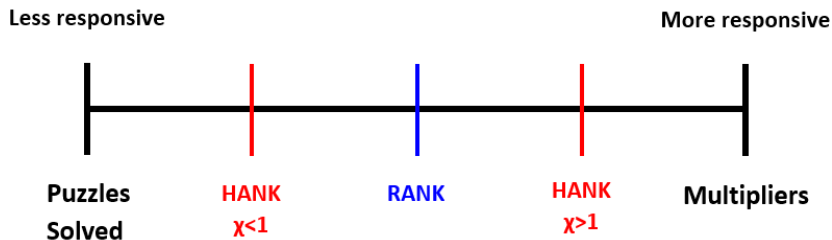
Condition for HtM to amplify: $\frac{dc_t^H}{dr_t} > \frac{dc_t^S}{dr_t} \iff \chi > 1$

But puzzles come from over-responsiveness to policy at the 'wrong' moments.

Puzzles vs Multipliers: how responsive is aggregate consumption to policy?



Puzzles vs Multipliers: how responsive is aggregate consumption to policy?



Comments

The paper shows an important property of HANK models, illuminated by the simplified version of HANK used.

- ▶ You convinced me χ is important!

Main aspect missing from full-scale HANK is endogenous λ .

- ▶ Kaplan Violante and Weidner (2014) data suggests it doesn't vary much at the business cycle frequency.

Comments

The paper shows an important property of HANK models, illuminated by the simplified version of HANK used.

- ▶ You convinced me χ is important!

Main aspect missing from full-scale HANK is endogenous λ .

- ▶ Kaplan Violante and Weidner (2014) data suggests it doesn't vary much at the business cycle frequency.

Rest of this discussion:

- ▶ Is χ constant?
- ▶ The role of profits.
- ▶ Are they all puzzles?

Is χ constant?

To fix the FG puzzle, we require $\chi < 1$ **in response to forward guidance**.

Can we have $\chi < 1$ for FG, but $\chi > 1$ for ordinary policy?

Is χ constant?

To fix the FG puzzle, we require $\chi < 1$ **in response to forward guidance**.

Can we have $\chi < 1$ for FG, but $\chi > 1$ for ordinary policy?

Yes, if we add that HtM households have some debt:

- ▶ $r_t \downarrow$ reduces debt service costs, so $y_t^H \uparrow\uparrow$. $\chi > 1$.
- ▶ $r_{t+h} \downarrow$ has little effect on current debt service costs, so smaller response of y_t^H . $\chi < 1$.
- ▶ Empirics: in UK, HtM have 2.9x more short term liquid debt than Non-HtM on average.

Countercyclical profits

Countercyclical profits are a standard feature of NK models:

- ▶ $y \uparrow \Rightarrow w \uparrow \Rightarrow MC \uparrow \Rightarrow \pi \downarrow$
- ▶ Evidence points the other way.

Not usually an issue in RANK, the representative household receives it as a lump sum. (Broer et al would disagree!)

In TANK (&HANK) it is an issue, because profits determine income heterogeneity. It's what drives $\chi > 1$ in the absence of redistribution in the model.

Countercyclical profits

Countercyclical profits are a standard feature of NK models:

- ▶ $y \uparrow \Rightarrow w \uparrow \Rightarrow MC \uparrow \Rightarrow \pi \downarrow$
- ▶ Evidence points the other way.

Not usually an issue in RANK, the representative household receives it as a lump sum. (Broer et al would disagree!)

In TANK (&HANK) it is an issue, because profits determine income heterogeneity. It's what drives $\chi > 1$ in the absence of redistribution in the model.

- ▶ A footnote in the paper says this isn't necessary for your results. Would be nice to have an explanation.
- ▶ My impression is this is a stand-in for a more complicated labour market (e.g.) that would give you similar results but with more work.

Are they all puzzles?

Inverted AD logic:

- ▶ For calibration to KMV, occurs if $\lambda > 0.7$
 - ▶ In US and UK, $\lambda \approx 0.35$
- ▶ Bilbiie and Straub (2012, 2013) argue that we observed AD inversion during the Great Inflation. So why is this a puzzle?

Are they all puzzles?

Inverted AD logic:

- ▶ For calibration to KMV, occurs if $\lambda > 0.7$
 - ▶ In US and UK, $\lambda \approx 0.35$
- ▶ Bilbiie and Straub (2012, 2013) argue that we observed AD inversion during the Great Inflation. So why is this a puzzle?

Failure of the Taylor Principle:

- ▶ Extreme conditions ($\phi \gg 4$) in the paper come from an extreme calibration: $\chi = 2$, $\kappa = 0.02$.
- ▶ With $\chi = 1.48$ and $\kappa = 0.1$ (to match KMV): $\phi > \mathbf{1.3}$.
- ▶ This also demonstrates how sensitive this Taylor Principle result is to parameter choices.

Conclusion

- ▶ The link between multipliers and puzzles is very intuitive once you see it.
- ▶ Paper is convincing on the importance of χ .
- ▶ Less so on the starkness of Catch-22.