Discussion of "Optimal Policy Rules in HANK" by Alisdair McKay and Christian K. Wolf

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The McKay-Wolf (2021) Approach

- Linear-quadratic optimal policy problem, using a sequence space representation of the equilibrium
- "Quantitatively relevant" mapping from instruments to targets, calibrated based on time-series evidence.
- This paper: application to the optimal monetary policy problem in a HANK environment

The Optimal Monetary Policy Problem in RANK

$$\min \ \mathbb{E}_0 \sum_{t=0}^{\infty} \beta^t \left(\pi_t^2 + \vartheta x_t^2 \right) \tag{1}$$

subject to:

$$\pi_t = \beta \mathbb{E}_t \{ \pi_{t+1} \} + \kappa x_t + u_t \tag{2}$$

$$x_t = -\frac{1}{\sigma}(i_t - \mathbb{E}_t \{ \pi_{t+1} \} - r_t^e) + \mathbb{E}_t \{ x_{t+1} \} \tag{3}$$

where $x_t \equiv y_t - y_t^e$

- Recursive structure:

(i) optimal plan for (x_t, π_t), using (1) and (2)
(ii) implementation, using (3)

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- Key insights

(i) in response to "efficient" shocks (r_t^e), fully stabilize x_t and π_t
(ii) in response to u_t shocks, $\pi_t > 0$ in the short run, but (persistent) $x_t < 0$.
Long run mean reversion of the price level.

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- How does the introduction of "inequality" affect the optimal monetary policy problem?
- Does it change any of the key insights from RANK? Qualitatively? Only quantitatively?
- Three possible "channels"

McKay-Wolf I ["Dual Mandate"]

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- Same (π_t, x_t) outcome as in RANK
- Implementation: if the mapping from interest rates to macro outcomes is "quantitatively relevant," then the path of interest rates also unaffected by HA.

$$\Rightarrow \text{"}\textit{inequality irrelevance}\text{"}$$

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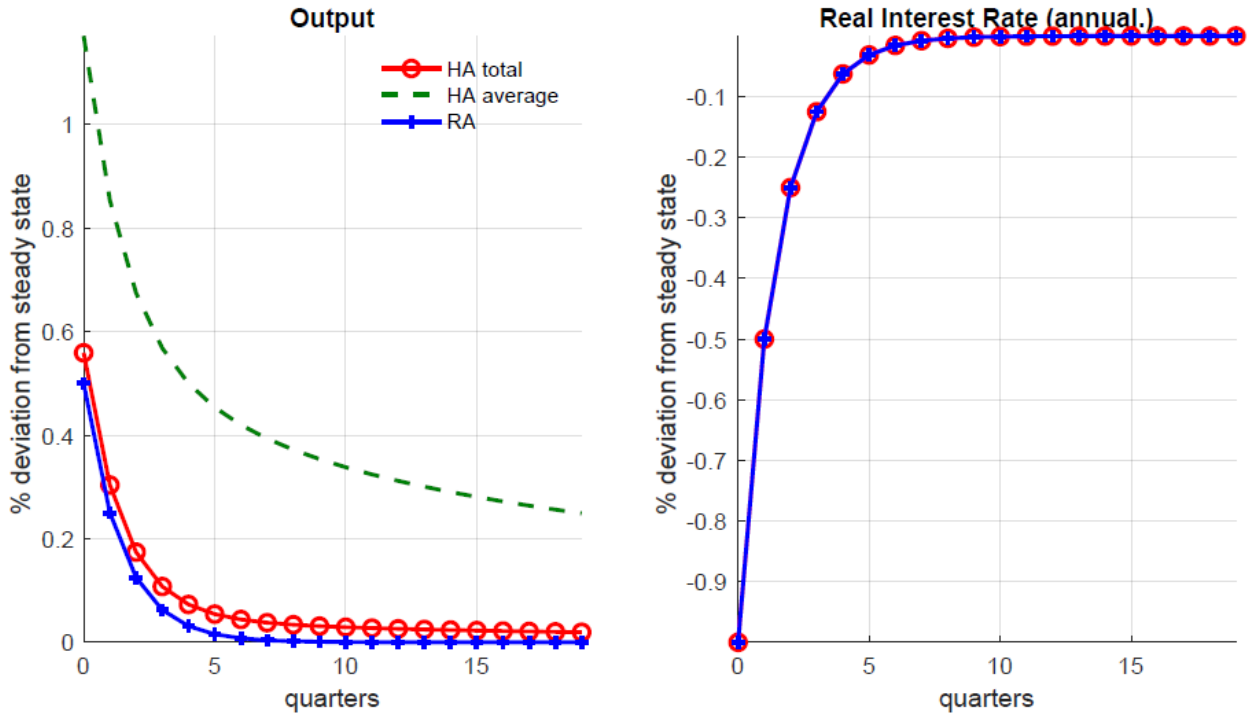
- **Comment**: What if one preferred to rely on a model-implied transmission? Inequality does not seem to affect much the mapping between interest rates and macro outcomes in typical HANK models. Two illustrations.

Figure 6: The Effects of a Monetary Policy Shock



Source: Debortoli and Galí (2021)

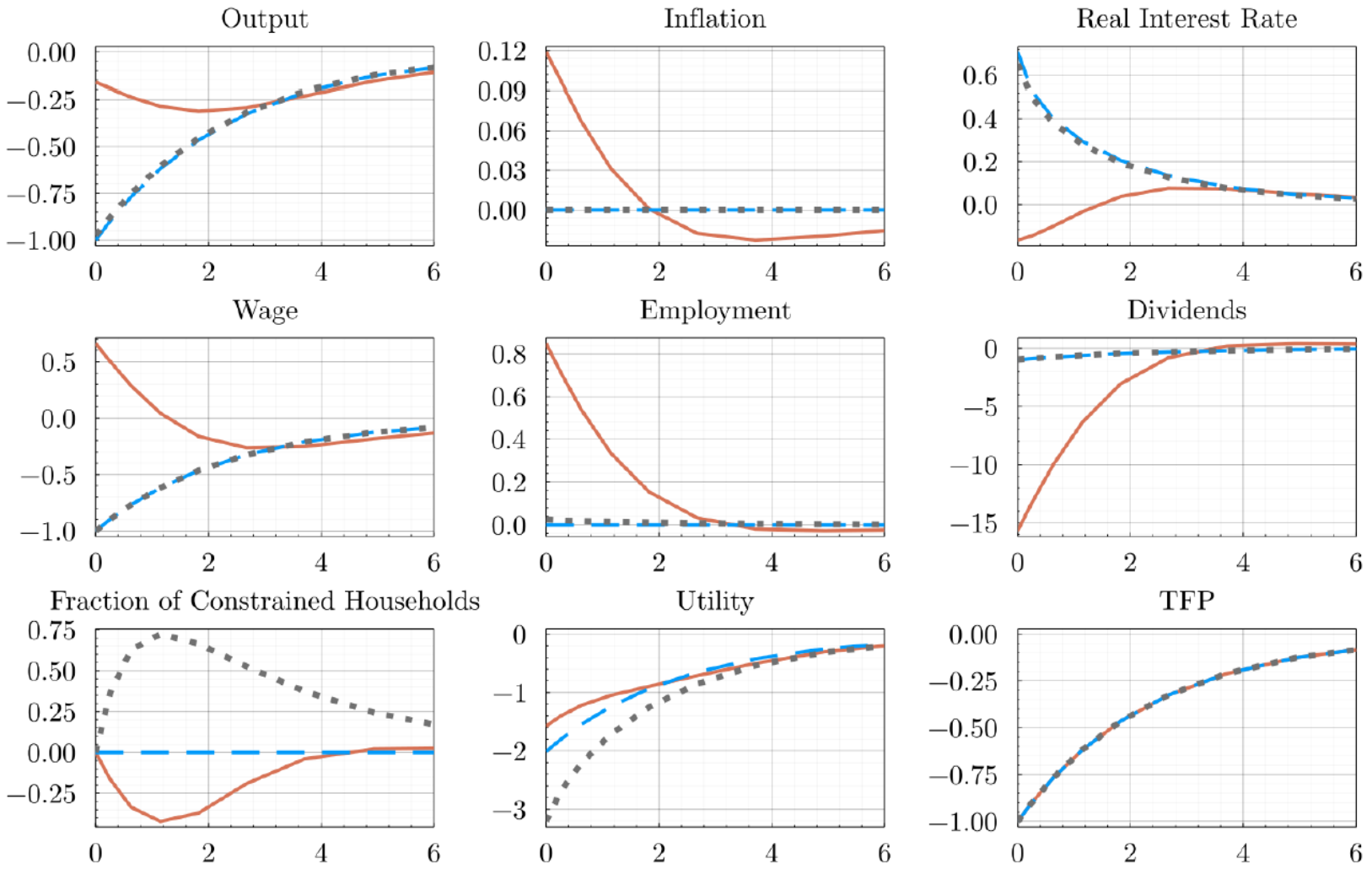


Figure 5: Comparison between responses to the TFP shock under the optimal monetary policy (OP) in HANK (orange solid line), OP in RANK (blue dashed line), and OP from RANK implemented in HANK (black dotted line). Plots show deviations from the steady state values: shock, inflation and real interest rate in percentage points, other variables in percent.

Source: Smirnov (2022)

McKay-Wolf II ["Ramsey Policy"]

$$\min \ \mathbb{E}_0 \sum_{t=0}^{\infty} \beta^t \left(\pi_t^2 + \vartheta x_t^2 + \lambda \int \widehat{\omega}(\zeta)^2 dF(\zeta) \right) \tag{1}$$

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plus a mapping from policy to target variables (data or model-based).

- In principle, optimal (π_t, x_t) outcome different from RANK ("distribution motive"). *But only if the policy instrument affects cross-sectional consumption inequality.*
- Model is calibrated so that monetary policy is (nearly) "distributionally neutral"

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- Distribution motive highly relevant for (lump-sum) transfers $\Rightarrow$ division of labor

Comments

- *"Inequality irrelevance"* is not a *general* result. MP may not be distributionally neutral in other economies (or sample periods). Even for the U.S. the evidence is not unambiguous. In those cases MP may have a role to play in addressing any distribution motive (e.g. Bhandari at al. 2021, Smirnov 2022). Can it beat transfers? Still, conditional analysis remains valid.

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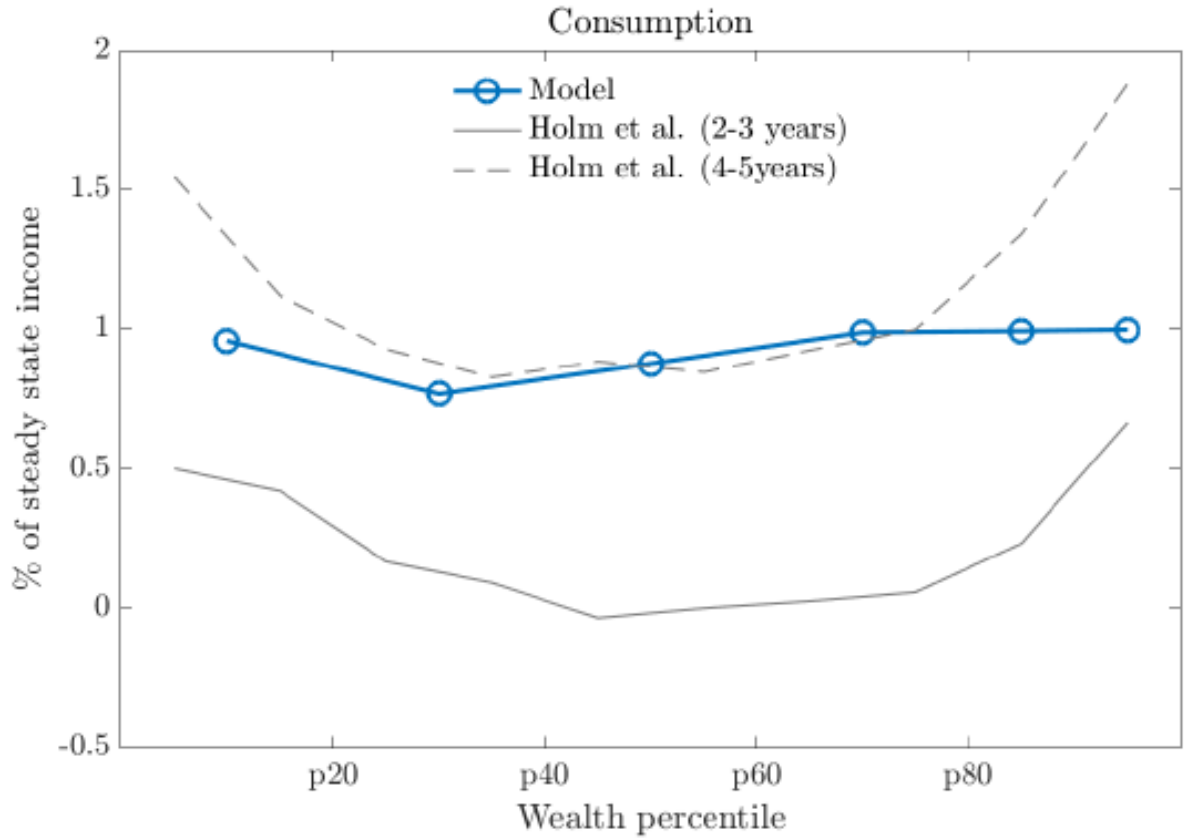
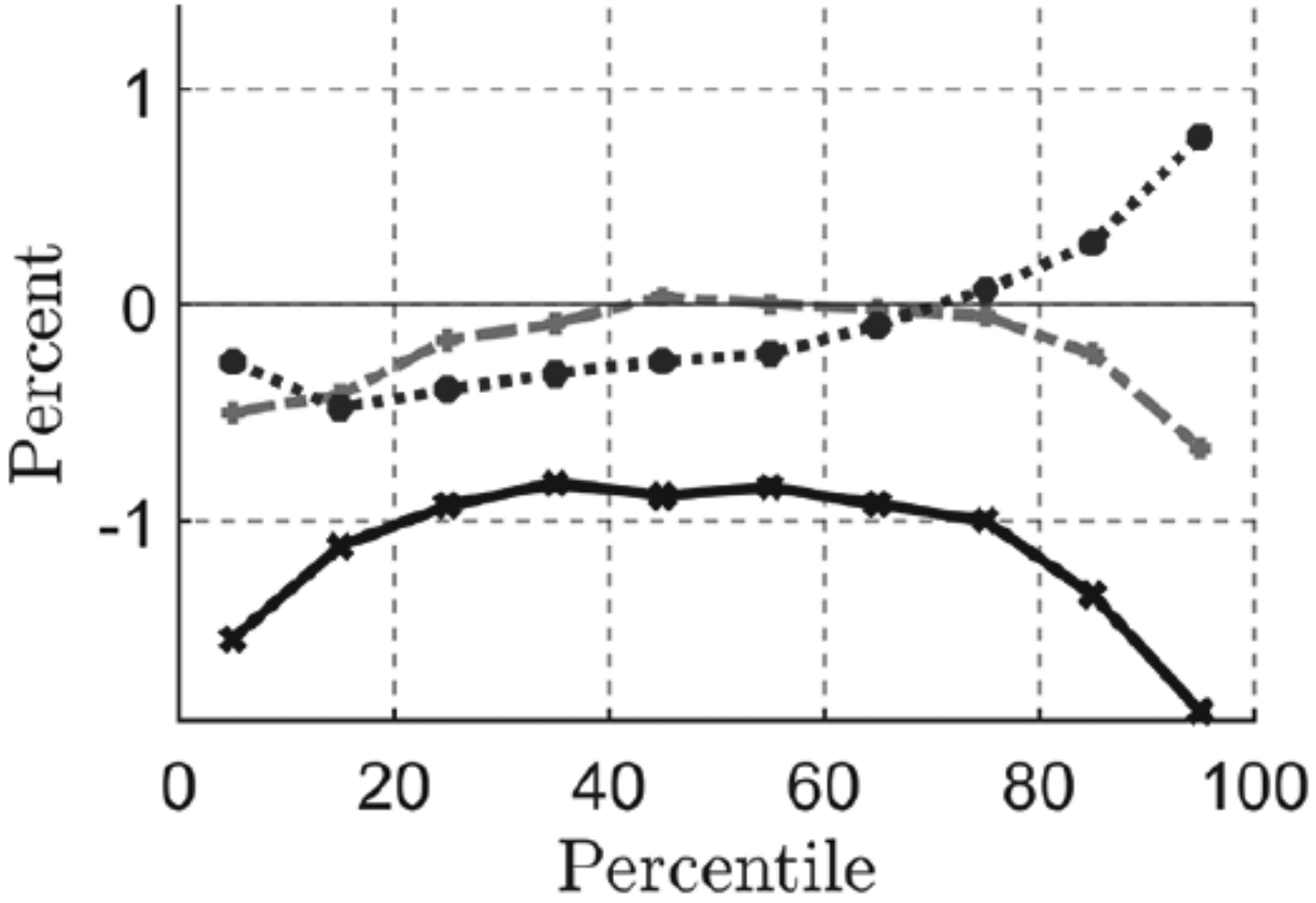


Figure 2: Initial response of consumption to an expansionary monetary policy shock across the distribution of wealth. The empirical estimates are from Holm et al. (2021), who rank households according to liquid assets, which we assume are monotonic in wealth in constructing this figure. We simulate the shock we estimate empirically in Appendix B.1 scaled to match the magnitude of the consumption responses in Holm et al.. Holm et al. find that the indirect effects of policy build through time whereas in our model they occur on impact.



Source: Holm, Paul and Tischbirek (2021)

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- Role of borrowing constraints? Interaction with policy?

Final Remarks

- Great paper!
- Tentative conclusion: inequality considerations do not overturn the main insights from the RANK literature regarding how monetary policy should be conducted.
- But this conclusion is not without challenge. More work is needed.