

Discussion of *Monetary Policy According to HANK*

Lee E. Ohanian

UCLA

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Interesting, Creative, and Provocative Paper!

- Different approach for analyzing policy in economies with *large impediments to trade*
- Differs from CEE, Smets-Wouters, Woodford, Clarida-Gali-Gertler, etc.
- Centerpiece of models above is “New Keynesian IS curve”:
intertemporal substitution

$$E_t \sigma \{c_{t+1} - c_t\} = i_t - E_t \pi_{t+1} \quad (1)$$

HANK Doesn't Have Strong Intertemporal Substitution

- HANK reminiscent of a much older literature:

$$\Delta C = b * \Delta Y, 0 < b < 1 \quad (2)$$

HANK's Alternative to Strong Intertemporal Substitution

- HANK's 4 impediments to trade
 - ▶ Costly nominal price adjustment
 - ▶ Individual income shocks + household borrowing constraint (Incomplete markets - Bewley et al)
 - ▶ Costly to borrow - wedge between borrowing & saving rate
 - ▶ Costly to accumulate or decumulate productive assets

Monetary Policy as Fiscal Policy?

- Monetary policy (changing nominal interest rate) is effectively *fiscal policy*
- *Fiscal policy*, because monetary policy changes tightness of gov't budget constraint
- Changes in gov't budget can have big (non-Ricardian) effects

Should We Abandon Models with Significant Intertemporal Substitution?

- No - estimating EIS requires several maintained assumptions
- Separable, identical utility functions, no home production, no learning-by-doing, consumers face same intertemporal prices,...
- Mao (1987) - Estimated EIS biased down, assuming separable utility
 - ▶ Estimated EIS zero when true EIS (nonseparable utility) is around 2
 - ▶ Many studies in literature subject to this potential problem
- Consumers choose remarkably different portfolios
- Pistaferri et al (2015) - 90/10 percentile difference of individual asset returns ranges between 3.2 percent to 7.5 percent

Perhaps Not Surprising that EIS Estimates Vary Widely

- Range of EIS estimates all over the map - literally...
- Havranek et al (2015) summarize 2,375 estimates of IES from datasets from 104 countries
- 3.1 (Austria) to -0.4 (Switzerland)

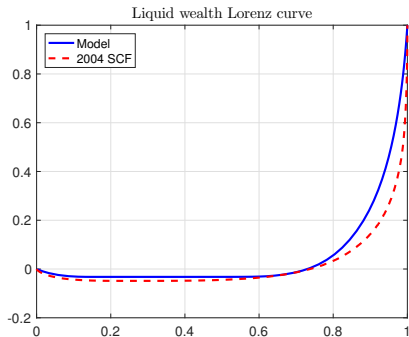
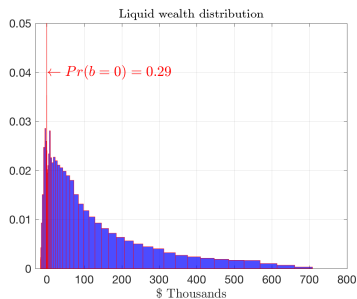
What about Excess Sensitivity of Consumption?

- Evidence of excess sensitivity for fairly small changes in budget sets, but....
- Jappelli and Pistaferri - bigger changes in budget sets dont appear to be puzzle (retirement, kids going to college)
- Reasonable to pursue research in standard models and KMV approach

Costly Trading and Wealthy "Hand-to-Mouth" Consumers

- Two assets: high return (business, illiquid) & low return (liquid)
 - ▶ Illiquid asset return compensates investors for high transaction costs
 - ▶ Borrowing limit & high borrowing rate (8%)
- Many households hold no or very few liquid assets
- Households thus *choose to be constrained*
- This generates "Wealthy Hand-to-Mouth" consumers

Wealth distributions: Liquid wealth



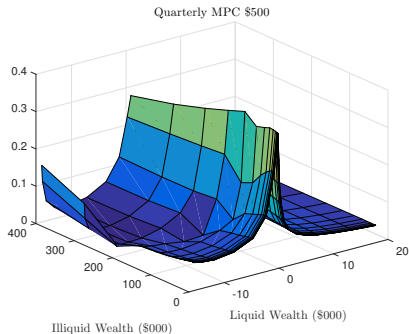
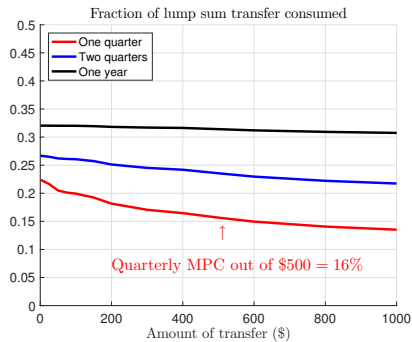
- Top 10% share: SCF 2004: 86%, Model: 75%
- Top 1% share: SCF 2004: 47%, Model: 18%
- Gini coefficient: SCF 2004: 0.98, Model: 0.86

Who are the Wealthy Hand-to-Mouth Consumers?





Model generates high and heterogeneous MPCs



Is Illiquidity Really as Big of a Problem as in the Model?

- Calibrate asset transaction cost function to capture liquid/illiquid shares and fraction of "hand-to-mouth" consumers

$$\text{trading cost} = .04 |d| + .96 \left| \frac{d}{\max\{a, \underline{a}\}} \right|^{1.4} * \max\{a, \underline{a}\} \quad (3)$$

- \$800 cost for \$3,000 transaction from \$100,000 in illiquid assets
- \$14,000 cost for \$25,000 transaction from \$100,000 in illiquid assets
- Generates "Wealthy Hand-to-Mouth Consumers"
- They exhibit high MPC for small shocks
- These are the consumers who provide the action in the model

This Economy Wants a Better Transactions Technology

- Society indeed produced a very efficient transaction technology
- Before May 1, 1975 - very expensive to buy and sell assets
 - ▶ Securities industry was a cartel with fixed commission rates
- \$2,400 commission to buy/sell 500 shares of a blue chip stock
- May 1, 1975 ("May Day"), Deregulation drives down trading costs

Today's Trading Costs can be Negligible

- Today, technological change & competition has reduced marginal cost to near zero
- Fidelity, Vanguard, Schwab, E-trade are low cost providers
 - ▶ 1998 Schwab transaction cost = \$90
 - ▶ 2006 Schwab transaction cost = \$22
 - ▶ Today, trading cost ranges between \$0 to \$7.95
- S & P 500 expense ratio about .05%

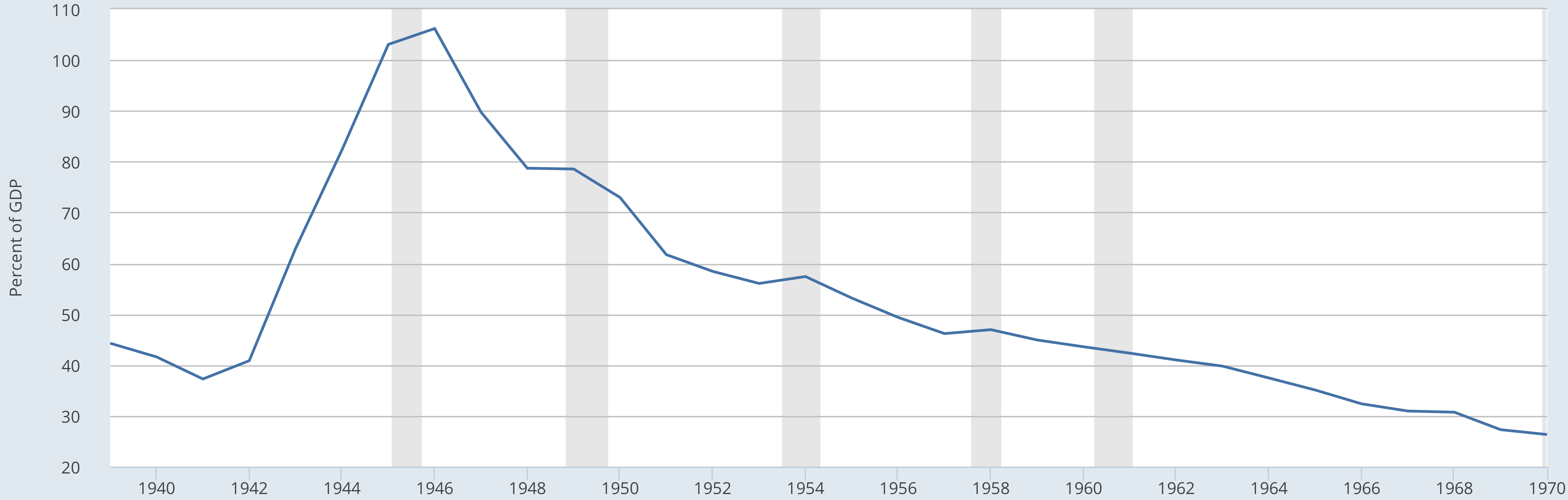
Isn't Housing More Illiquid?

- What about housing? Low cost home equity credit lines
- *Lending Tree* offers 4.3% (\$25,000 line) to 3% (\$150,000)
- Can borrow up to \$50,000 on 403(b)/457 plans for 5 years
- Can borrow against private business
- Model would perform differently with less costly transactions

Does Fiscal Policy Have Big (Non-Ricardian) Effects?

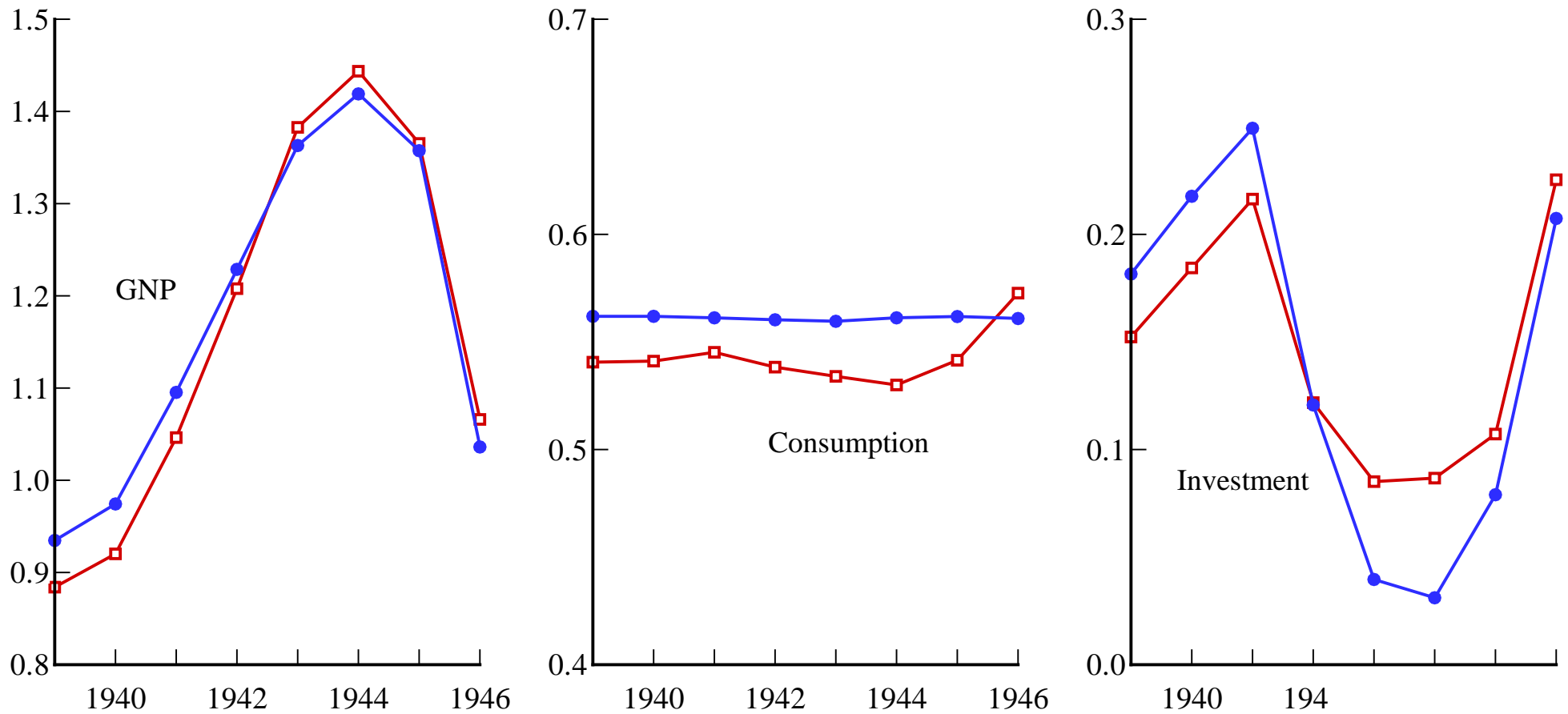
- Interesting to use model to study World War II
- Enormous changes in gov't budget at this time
- G rises by 400%, debt rises to 100 percent of output, and...
- Big postwar deflation sharply reduces real value of debt
- Neoclassical model (McGrattan-Ohanian, 2010 IER) consistent with WWII
- Interesting project: Feed WWII into HANK

— Gross Federal Debt Held by the Public as Percent of Gross Domestic Product



Source: Federal Reserve Bank of St. Louis, US. Office of Management and Budget

Figure 33 Real Detrended GNP, Private Consumption, and Private Investment, 1
(Benchmark Deterministic Model)



Legend

- U.S. Data —■—
- Model —●—

Note: Data series are divided by the 1946 real detrended level of GNP less military compensation.

Conclusion

- Fascinating paper - congrats to authors!
- Interesting tests to conduct for HANK:
 - ▶ Big changes over time in asset market transaction costs and credit availability
 - ▶ Effect of big historical changes in fiscal policy
 - ▶ Effect of changes in bankruptcy laws
- Paper highlights importance of understanding individual portfolios
- Looking forward to seeing more