

DISCUSSION OF:

“HETEROGENEOUS SPENDING, HETEROGENEOUS MULTIPLIERS” (MJV)

“LIQUIDITY TRAPS, PRUDENTIAL POLICIES & INTERNATIONAL SPILLOVERS” (BC)

Makoto Nakajima

FRB PHILADELPHIA

SEPTEMBER 20, 2022

EQUITABLE GROWTH 2022 RESEARCH CONFERENCE

THE VIEWS EXPRESSED HERE ARE THOSE OF THE AUTHOR. THEY DO NOT NECESSARILY COINCIDE WITH THE VIEWS OF THE FEDERAL RESERVE BANK OF PHILADELPHIA OR ANY OTHER INDIVIDUAL IN OR MEMBER OF THE FEDERAL RESERVE SYSTEM.

- Standard/conventional macroeconomic model:
 1. Representative consumer
 2. Representative firm
 3. Homogeneous consumption goods
- Recent developments:
 1. Heterogeneous consumers (e.g., HANK model)
 2. Heterogeneous firms
 3. Homogeneous consumption goods
- Both papers consider heterogeneous consumption goods.

■ Services and Goods

1. Use regional variations of military spending on goods and services, identify fiscal multipliers of purchasing goods and services.
2. 1% increase in services spending raises employment by 0.36%.
3. The effect of an increase in goods spending is non-significant.
4. Labor intensity in services makes the differences.
5. (Small comment) The main results are not about “multiplier” in the conventional sense, but how G increases employment and wages.

■ Tradables and Non-Tradables

1. Positive and normative analysis on the interactions between monetary and macroprudential policies in an open economy model with ZLB.
2. Relative size of σ (intertemporal elasticity of substitution) and γ (elasticity of substitution between tradables and non-tradables) is crucial for both monetary transmission and the optimal combination of monetary and macroprudential policies.
3. Traditional channel: change in r shifts consumption between today and tomorrow ($\leftarrow \sigma$ matters).
4. BC's emphasis: change in e shifts consumption between tradables and non-tradables ($\leftarrow \gamma$ matters).

Comment 1: Goods Heterogeneity

- Various dimensions of heterogeneity in consumption goods.
 - ▶ Transportation cost (tradables and non-tradables)
 - ▶ Produced with different inputs (services and goods)
 - ▶ Demanded by different groups of people (healthcare, luxury goods, subsistence goods)
 - ▶ Lumpiness (housing and other durables)
 - ▶ Collateralized borrowing (housing, motor vehicles)
 - ▶ Low substitutability (energy)

Comment 2: Consumer Heterogeneity

- Interactions between goods heterogeneity and consumer heterogeneity are potentially important.
- Goods and services:
 - ▶ Labor-intensive service sector could generate more income for lower-income consumers, with a higher MPC.
- Tradables and non-tradables.
 - ▶ If non-tradable sectors hire more lower-income workers, a change in the exchange rate e induces redistribution of income.
 - ▶ Higher-income and lower-income consumers might consume different mix of tradables and non-tradables.

Comment 3: Firm Heterogeneity

- Interactions between goods heterogeneity and firm heterogeneity are potentially important.
- Goods and services:
 - ▶ Effects of government purchases to employment and wages might be different if a large firm in a local labor market is the recipient.
- Tradables and non-tradables.
 - ▶ If tradables and non-tradables might be produced by firms of different size (and other characteristics) and thus respond differently when e changes.