The Transmission Mechanisms of International Business Cycles: Output Spillovers through Trade and Financial Linkages

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Summary

- **Goal:** Study how US monetary shocks propagate to other countries
  - Heterogeneity across countries: focus on trade and financial linkages
- **Methodology:** Local projections with instruments
  - High frequency monetary shocks as instruments
  - Allow different effects across country groups (high vs. low trade)
- **Main findings:**
  1. Large effects on foreign output: $r^{US} \uparrow$ by 1% pt. $\Longrightarrow y^f \downarrow$ by 2%
  2. Effect larger for 'high trade' countries, driven by trade network
  3. Effect does not seem to depend on financial openness

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  - Data shows foreign output responds to US rates
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  - Nakamura-Steinsson 2018: shocks are small "power problem"
- Comment 2: How should we interpret results?
  - 'Models that do not account for linkages are incomplete'
  - Paper: (demand) shocks are propagated through trade linkages
  - 'Output spillovers through trade linkages'

Mechanisms: effect of US monetary tightening in Spain

- Assumption: $y^{sp} = y^{sp}\left(r^{us}, r^{sp}\left(r^{us}\right)\right)$

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Interpretation 1: Propagation of foreign demand shocks

- $\frac{dy^{sp}}{dr^{us}}$: Partial effect (fixing Spanish interest rates) $\simeq [-0.5, -1]$
- Back of the envelope calculation:
  - $\lambda_{us,sp} \equiv \frac{\text{Spanish exports to US}}{\text{GDP in Spain}} \simeq 1\%$
  - Effect of the shock on US output: $\frac{dy^{us}}{dr^{us}} \simeq -2$
  - Implied direct effect trough fall in US demand: $\lambda_{us,sp} \times \frac{dy^{us}}{dr^{us}} \simeq -0.02$
- -0.02 if very far from -0.5!!
  - Even if network accounts for half the effect
  - Hard to come up with multiplier that big

Alternative I: demand from non-US countries

- Paper assumes domestic effect same in all countries $\frac{\partial y^{sp}}{\partial r^{sp}} = \frac{\partial y^{w}}{\partial r^{w}}$
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- Figure 4.a shows interest rates in closed economies respond more
  - Demand shock should be larger for closed economies
- Results not likely to be driven by propagation of demand shocks

Other alternatives

1. Maybe tradables are more interest sensitive than non-tradables?
   - More generally, if sectorial composition correlated with openness

2. Nominal rigidities + Dollar Currency Paradigm
   - US dollar appreciates, trade falls (Casas et al. 2020)

3. Other country characteristics correlated with openness
   - 44 countries in the paper
   - Only 12 countries where Trade Openness$\neq$Financial Openness

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- Comment 1: Report results for US
- Comment 2: How should we interpret results?
  - Are results driven by propagation of demand shocks through trade?
  - If not, then what? How should we extend models?