Beyond firm size: network position and shock transmission in firm-to-firm production networks across five economies

ChaMP 2026 Discussion[1]

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[1] The views are those of the presenter and not the Federal Reserve Bank of Dallas or the Federal Reserve System.

Big Picture

- Transmission of policy shocks through production networks
  - Existing papers focus on sectoral production networks (e.g. Ozdagli-Weber RFS25, di Giovanni and Hale JF22)
- Valuable contribution:
  - Firm-to-firm production networks
  - Use tax records for five European economies
  - Network heterogeneity: size, centrality, up/downstreamness
  - Monetary policy transmission as application
- Main comment: separate directly measured network facts from causal or counterfactual policy claims.

Main Results

- Centrality $=$ Size $\neq$ Upstreamness
  - Upstream firms' sales and prices react more.
  - Network structure can explain heterogeneity in policy effects across countries.
  - Larger firms upstream $\rightarrow$larger aggregate response. (Italy)
  - Larger firms downstream $\rightarrow$smaller aggregate response. (Estonia/Hungary)

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- Interesting B2B facts
  - The top 1% of firms account half of domestic B2B sales.
  - Number of customers explains half of firm size dispersion.
  - Within-sector heterogeneity $>$ cross-sector heterogeneity for size distr.
  - Firm-level networks are sparser than industry networks.

1. Measurement and Harmonization

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- Solution: Add common-sample checks: common thresholds, common sectors/legal forms, high-coverage firms, and sensitivity to missing foreign/consumer links.

2. Core Network Interpretation

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- Comparison of firm-level and sector-level networks
  - Top 1% of firms account for nearly half or more of network sales
  - Are within-sector flows mostly driven by large firms?
  - Does the conclusion regarding sparsity and roundabout production survive in a value-weighted analysis focused on the largest firms?

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  - Does the conclusion regarding sparsity and roundabout production survive in a value-weighted analysis focused on the largest firms?
- Is upstreamness another characteristic in disguise?
  - Unlike sectors, firm-level links are endogenous.
  - How is upstreamness correlated with other firm characteristics known to capture monetary policy exposure? (Ozdagli-Velikov RFS 2018)

3. Monetary Policy Application

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  - Hold fixed the Belgian estimated mapping from upstreamness to monetary-policy response
  - Ask how aggregate response would differ if firms were distributed as in Italy, Portugal, Hungary, Estonia

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- The crucial assumptions are linearity of policy response in upstreamness and the primacy of upstreamness in policy response.
  - Can the authors derive the linear relationship from microfoundations or use higher order/nonlinear terms to see if it makes any difference?
  - Report aggregate response magnitudes with confidence intervals, compare Belgian- and Estonian-based calibrations, and run horse races with size, sector, degree, centrality, and openness.