Inputs in Distress: Geoeconomic Fragmentation and Firms' Sourcing

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Discussion by
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Summary

- **This Paper**
  - ◇ How would disruptions to the supply of foreign critical inputs (FCI) might affect valued added at different levels of aggregation in the euro area?
- **Why Should We Care?**
  - ◇ Events: Covid-19, War in Ukraine, etc
  - ◇ Policies: Trade War, InvestEU, REPower EU, CHIPS/IRA Act, Dual Circulation, etc
- **How Did They Answer the Question?**
  - ◇ Firm-level balance sheet info + product-level customs data from 5 EU countries (BFISS)
  - ◇ Empirical analysis + partial equilibrium analytical framework
- **Main Takeaways**
  - ◇ Short-term costs to supply chain disruptions of FCIs can be substantial
  - ◇ Heterogeneous picture at firm, sector, region and country level

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Plan for Discussion

- Comment on the identification
- Comment on the analytical framework
- Additional comments

Comment 1: Identification

- "The advantage of granular data is that this aggregate shock can be combined with firms' heterogeneous exposure to FCIs to generate idiosyncratic shocks. These shift-share shocks are then fed into our model to assess how geoeconomic fragmentation may affect firms, sectors, regions and countries."

$$\text{firm-level shock: } \varepsilon_i = \underbrace{\text{China-aligned share}_i}_{\text{Share}} \times \underbrace{\delta}_{\text{Shift}}$$

- If the authors are serious with the shift-share approach as identification strategy, I would:
  - ◇ Discuss the endogeneity concern if only use a simple OLS regression
  - ◇ At least extend the time horizon to two years/periods (as in Autor et al (2013))
  - ◇ Share exo. (Goldsmith-Pinkham et al (2020)) vs. Shift exo. (Borusyak et al (2022))
  - ◇ Size of BFISS vs China-aligned economies, are the shifts really exogeneous? (Hummels et al (2014), Barrows and Ollivier (2021))
  - ◇ Check list for the shift-share approach (Borusyak et al (2025))
    - Bridge the gap between the observed and ideal shifts
    - Include the "incomplete share" control
    - Lag shares to the beginning of the natural experiment
    - Report descriptive statistics for shifts in addition to observations
    - Implement balance tests for shifts in addition to the instrument
    - Produce the main estimates with correct standard errors and check sensitivity
- If not, consider dropping the term or replacing to avoid confusion

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- Cobb-Douglas production function (K, L, M), with M being a CES aggregation of FCI and non-FCI (Bachmann et al. (2022))
- Elasiticity of substitution between FCI and non-FCI: $\sigma \in [0, 0.2]$
- $\sigma = 0$, Leontief case, is this internally consistent with fixed and non-zero shares in Cobb-Douglas production function?
  - ◇ Possible justification: Putty-Clay approach (Atkeson and Kehoe, 1999; Gilchrist and Williams, 2000)
- With PE, can still consider separating FCI-intensive vs FCI-not intensive sectors
  - ◇ σ might not be common across sectors (not time-varying)
  - ◇ Embedding input-output linkage allows you to explore the propagation of shocks and generate more accurate quantitative implications
- Strengthen the connection between the definition of your FCIs and your framework
  - ◇ Some of the FCIs may be mainly affected via demand channel while your framework is from supply-side
- Mechanisms outside the model?

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Additional Comments

- Extending the time horizon
  - ◇ Extensive margin
  - ◇ Trace those firms that are more exposed to FCI: profitability, product basket, etc
- Further leveraging the data
  - ◇ Prices vs Quantity ⇒ different policy implications
  - ◇ Do they vary by the sourcing countries?
- Enrich heterogeneity
  - ◇ Cross-country
  - ◇ Within-country: cross-sectors, cross-regions
- More discussion on β?

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Conclusion

- Super interesting and timely paper! With rich policy implications.
- I would at least:
  - Sharpen the identification strategy of the empirical part
  - Defend the PE framework with more discussions, possibly enrich the framework to allow more accurate quantitative implications
- Looking forward to reading the next edition of the paper!