Discussion of: "Connected for Better or Worse?" by Miranda-Pinto, Rojas, Saffie, and Silva

César Sosa-Padilla

Notre Dame & NBER

NBER Summer Institute, IFM – July 2025

Paper Overview: Motivation and Question

- Emerging markets experience more severe Sudden Stops than advanced economies
- Traditional explanations focus on financial depth and external volatility
- This paper proposes a novel structural explanation:
  - **Production network structure** matters for crisis amplification
  - Specifically: **intersectoral input-output linkages** influence profit dynamics and collateral constraints

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  - Specifically: **intersectoral input-output linkages** influence profit dynamics and collateral constraints
- Research question: *How does the production network structure affect the frequency and severity of Sudden Stops?*

Paper Overview: Theoretical Mechanism

- Two-sector model: T and NT, linked through intermediate inputs
- Households face a borrowing constraint tied to sectoral profits
- **In a Sudden Stop:**
  - External credit tightens
  - Input demand falls, affecting prices
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- **Key insight:** In economies with strong intersectoral linkages, falling input prices help reduce cost pressures and soften the profit drop
- **Result:** Denser networks generate *automatic stabilizers* through price adjustment

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- **In sparse networks:** limited price effects $\rightarrow$ sharp profit contraction $\rightarrow$ deeper crisis

Paper Overview: Empirical Evidence

- Use OECD input-output data for emerging and advanced economies
- Define "distance to diagonal" as a measure of production network sparsity
- Key facts:
  - EMEs have sparser production networks (e.g., more commodity use, fewer domestic input links)
  - Advanced economies have denser nontradable input linkages
- Panel regressions:
  - Countries with denser networks suffer **smaller GDP drops and CA reversals** during Sudden Stops
- Supports the idea that network structure modulates crisis outcomes

Paper Overview: Quantitative Results and Policy

- Extend to 3-sectors: commodities, (other) tradables, and nontradables
- **Counterfactual:**
  - Give an ADV economy the network structure of an EM economy
  - Result: 30% larger GDP drop, 28% larger CA reversal, and 50% higher crisis probability.
- **Policy analysis:**
  - Debt taxes reduce crisis risk but offer small welfare gains
  - Sectoral taxes can reallocate production but trade off resilience vs. efficiency

Takeaway: Macroprudential policy must consider real production structure, not just financial exposure.

Comments, Thoughts, Digressions

Comment 1: No "True" Factors of Production

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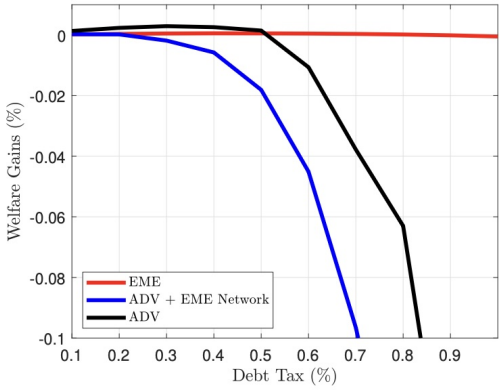
- Suggestion: add labor
  - could also assume CRS in every sector $\rightarrow$ labor income only flow in the collateral const.

Comment 2: Relevance for Policy



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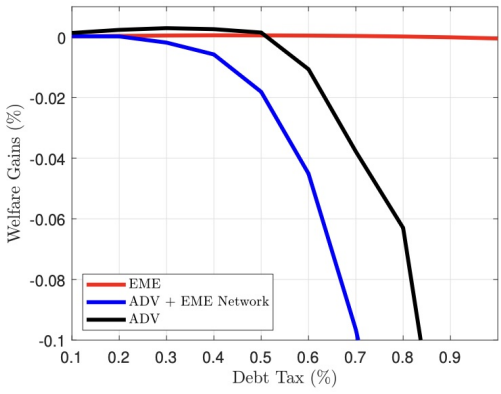

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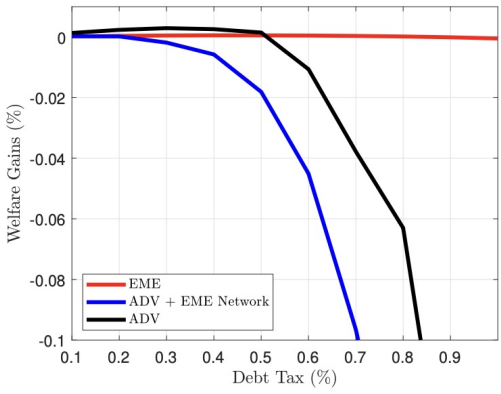

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My take:

- 'Do-nothing' approach is very close to optimal
- This holds for any structure

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$$p^N \frac{\partial y_N}{\partial m_C^N} = 1$$

Planner's solution:

$$p^N \frac{\partial y_N}{\partial m_C^N} = \frac{\lambda_1 + \mu\kappa}{U_c + \mu\kappa \left(\frac{\partial \pi}{\partial c_N} \cdot \frac{1}{p^N} \right)}$$

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- *State-contingent taxes*: increase during risk buildup, relax in stable periods
- *Network-targeted policies*: focus on central sectors or fragile input pairs

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[add. comments]

Last Slide

- Rich and ambitious paper combining theory, data, and quantitative experiments
- Makes a strong case for why production networks matter for macro-financial fragility
- A few places where further exploration could strengthen the results:
  - Addressing factors of production
  - Deepening the policy relevance
  - External validation of quantitative mechanisms
- Future research:
  - Industrial policy via network design
  - Embed production and financial linkages into the network

Appendix: Additional Comments

Comment 4: The Financial Constraint Is Not Networked

- The borrowing constraint depends on **aggregate profits**:

$$qb_{t+1} \geq -\kappa(\pi_N + \pi_T)$$

- Network structure affects profits indirectly (via input prices), but:
  - The constraint itself does **not reflect sectoral linkages or exposure**.
  - There are no financial relationships across sectors (e.g., trade credit, supplier financing).

- **Implication:** The model misses an important dimension of amplification:
  - In reality, production and financial networks often overlap.
  - Shocks can propagate via **credit chains** and payment disruptions.

- **(Ambitious) Future direction:** Embed production **and** financial linkages into the network to capture richer crisis dynamics

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Comment 5: Beefing-up the Quantitative Model

a Empirical section uses "distance to diagonal" metric

Idea: Construct the same metric using model-generated input-output data

Validation: Does the model replicate the observed correlation with crisis severity?

b Can say more about the sudden stops under different network structures?

- Full distribution of GDP and CA changes
- Are other variables different around a typical SS?

c Need a richer shock structure

- Move past the current two–point, orthogonal spec.

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