Comments on “The Regional Spillover Effects of the Tohoku Earthquake” by Dekle, Hong, and Xie

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Motivation

- Tohoku earthquake had varying impacts on regional industrial productions
  - -35% in Tohoku (in March 2011)
  - -25% in Chubu
  - -20% in Kanto
  - less than -10% in other regions
- This paper estimates a spatial diffusion model
  - using regional input-output tables as distance measure
  - Kanto as a dominant region

Findings

- It takes 2 years to absorb a half of own regional shock
- Inter-regional propagation effects peak at 6 months
- Tohoku earthquake (3-sigma shock) lowers national IP by 6% in a month, 12% in 3 months, and 9.6% in 20 months
- Spatial estimates do not corroborate the observed pattern of regional disparity

Comments

- Robustness
  - IR estimates seem too large and persistent
  - What if sample is restricted to pre-earthquake?
  - What if removing financial crisis periods?
- Experiment specification
  - “1 unit shock on Tohoku” may be too broad
  - some industries are hit hard (seafood, pulp+paper, iron casting), some boomed (retail, construction)

Comments cont'd

- Concurrent events
  - Aftershocks in Kanto (Ibaragi & Chiba) and induced earthquake in Chubu (Niigata & Shizuoka)
  - Tsunami and fluidization in Kanto (Ibaragi & Chiba)
  - Failures in transportation, communication, and distribution (esp Tokyo)
  - Demolished structure in Kanto (Ibaragi, Tochigi, Tokyo etc)
  - LPG fire on Tokyo Bay

Power Failure

- Power-use restriction (esp rotating blackouts in Kanto and a part of Chubu)
- Sudden shift to fossil fuel power and high electricity price
- → impacts on manufacturers that concentrate in Kanto and Chubu