Discussion of "The Impact of Regional and Sectoral Productivity Changes on the US Economy" by Caliendo, Parro, Rossi-Hansberg, and Sarte

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What CPRS Do

- Study the quantitative aggregate impact of regional/sectoral productivity changes
- Consider a model with inter-regional and inter-sectoral trade as a propagating mechanism of region/sector specific productivity changes
- Quantitative model estimated/calibrated to US data for 50 states, 26 sectors
- Use detailed trade flow data by industry across states in the US economy
- Obtain aggregate/region/sector elasticities of region/sector productivity changes on measured TFP, GDP, and employment

What CPRS Find

- Region/sector productivity changes have substantial different quantitative aggregate implications
- Productivity changes have markedly different effects in different regions and sectors
- The differential effects are generated by the patterns of regional trade (via selection in EK type model) and labor migration

Comments

1. Question/Motivation – too broad...

   - ▶ Objective "study the impact of regional and sectoral productivity changes on the US economy" too broad
   - ▶ Aggregate productivity growth (secular or transitory) arises from disaggregate changes across regions/sectors
   - ▶ Key question is the relevance of disaggregated changes, may be easier to tie with a specific issue or set of issues
   - ▶ For example, in macro development disaggregating across sectors has been useful for cross-country labor productivity differences (sectoral differences and structural change), similarly disaggregating at the establishment level (allocation of factors across establishments)
   - ▶ A specific focus will make it easier to judge the relevance of model abstraction and quantitative analysis
   - ▶ A specific issue will also make it easier to motivate the importance of the disaggregate analysis

Comments

2. Relation to literature

- ▶ The paper relates to the business cycle literature and trade
- ▶ Benefit of relating also to macro/development literature where sectoral structure (structural transformation) and openness/access to trade have been emphasized in understanding aggregate outcomes across countries
- ▶ For example, Duarte and Restuccia (2010), Adamopoulos (2011), Tombe (2013), Uy, Yi and Zhang (2013), Teignier (2012), Swiecki (2013), among others...

Comments

3. Facts

- ▶ Paper can improve on the organization and documentation of facts
- ▶ For example, to show that the differences in GDP shares across states in the US does not arise entirely from geographic size, Figure 1 reports a map with color/observations (popular among trade papers)
- ▶ A more effective presentation of this fact could be via a scatter-plot of size and GDP shares across states
- ▶ Similar issue arises in many other Figures where what is being emphasized does not jump at you from the reported graph

Comments

4. Model abstraction

   ▶ Limited by the large number of regions/sectors and data
   ▶ Nevertheless, one issue relates to the skill differences of
     workers and how this affects region/sector TFP calculations as
     well as aggregate impacts of the implied labor mobility

Comments

5. Importance of trade barriers

  - ▶ Similar strategy to cross-country sectoral analysis
  - ▶ Trade flows are used in the model to pin down trade cost, and then measures of distance are used to separate the geographic component of trade barriers
  - ▶ Results different from cross-country analysis: in US regions distance is a key barrier to trade, whereas across countries, other barriers are key (interesting to compare to regional analysis in a poor country, reallocation across provinces in China, Brandt et al. 2013...)
  - ▶ Key: connection to policy or technological change

Conclusion

- ▶ Impressive paper on an interesting and important subject
- ▶ Paper will benefit from a tighter relationship to cross-country analysis of the sectoral structure for aggregate outcomes, where key differences are labor mobility and perhaps the nature of trade barriers
- ▶ Paper will benefit from a sharper presentation of facts and results