

# Productivity, (Mis)allocation and Trade

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## Introduction

What is the effect of trade liberalization on aggregate productivity and welfare?

- Export liberalization leads to higher productivity and reallocation of resources towards productive firms - import can reduce it
- Ambiguous effect if there is misallocation

Methodology:

- Melitz (2003) model: impact of trade on productivity and welfare
- Regressions: the impact of trade on productivity

# Theory

- Goal: establish a connection between trade and productivity
- Ingredients:
  - Firms with heterogeneous productivity, entry & exit, only labor
  - Two components: underlying marginal cost  $\times$  distortions
  - GE model: Wages can be fixed or flexible
- Show:
  - Gains from trade are ambiguous, especially if there is misallocation
  - OP decomposition is **not** indicative of allocative efficiency

## Discussion of Theory

- Interpretation of "Fixed" wages - only GE is price effect
- Distortions are exogenously given and do not change  $\implies$  OP covariance?
- Why focus on OP decomposition if it is ambiguous? Or is it not?
- Why not estimate/calibrate the model directly as in Bai et. al (2018)?
- Multiple advantages:
  - Rich geographical data – Heterogeneity in misallocation across locations
  - Sharper predictions in terms of observables, can look outside OP
  - Quantitatively explain the mechanism
  - Counterfactuals are possible

# Empirics

- Goal: Effect of trade on the *level* of labor productivity
- Ingredients:
  - Construct sector level export demand and import competition
  - Regress (parts of) productivity on exports/imports
  - Controls, IV: Bartik, Tariffs,
- Show that a 20% increase in:
  - Exports  $\implies$  Productivity  $\uparrow$  [7.6%; 8.2%]
  - Imports  $\implies$  Productivity  $\uparrow$  [1%; 10%]
  - Efficient institutions dampen the gains from exports, increase from imports

## Discussion of Empirics

- Combining CompNet with WIOD is a great idea – trade for services
- Appendix Table 2 is interesting in itself – regressions on growth:
  - Exports only increases productivity through reallocation
  - Imports only through raising average productivity
- OP decomposition behaves in line with theory – but was it informative there?
- Other misallocation measures behave similarly:
  - Reinforces the empirical analysis
  - Another reason to use the theoretical model
- Identification and within EU trade - manufacturing "tariffs" in 1998?

## Conclusion

- Interesting paper, quantifies gains from trade across different countries
- With the use of a consistent dataset
- Methodological contribution about the OP decomposition and misallocation
- How does it compare to the Arkolakis et. al (2012) result?
- What is the main difficulty in estimating the model? Multiple sectors?

## Smaller Issues

- Economics of the fixed wages in this sector?
- Extensive numerical exercise: which parameters are key outside misallocation
- Mechanism after theory to prepare us for the result?
- Import/export share should be visible in the numerical analysis (not only cost)
- $R^2$  decomposition with fixed effects
- Some data ("Mean aggregate productivity") should not be in the main text