Productivity Partnership Data School

Miguel Cardoso

Accounting for Foreign-born Employees in a Firm's Decision to Export

June 2017

1. **Trying to understand and model the decisions of firms to export**

   1. More productive firms will export and less productive firms only sell domestically or exit the market entirely

   2. Still need to introduce a substantial amount of firm idiosyncratic heterogeneity to match the data on export participation (Eaton, Kortum, and Kramarz, 2011)

      1. Trouble explaining the vastly different performance of the same firm in different markets

2. **Understand the connection between migration patterns and trade flows**

   ❶ Information frictions exist in international trade that members of migrant networks can help overcome

   ❷ Immigrants exert a significant influence on the balance of Canadian trade; a 10% increase in immigrants in associated with a 1% increase in exports to that source country and a 3% increase in imports (Head, and Ries, 1998)

Accounting for Foreign-born Employees in a Firm's Decision to Export

- Document the relationship between firms that export and the composition of their workforce
  - Source country of employees can help explain the variation in export participation of firms

  - A new source of firm heterogeneity that may be helpful in explaining the patterns of firm exports

- How are individual firms utilizing the changing demographics to overcome information frictions when exporting
  - Why is there a link between aggregate trade flows and migration patterns

  - Study possible mechanisms, such as the importance of language barriers

CDER Project - Data

Linked Firm Data

- Canadian firm level value of exports by country of destination over multiple years
- Information on the type of good being exported (homogeneous vs differentiated products)

Linked Employee Data

- Information on worker composition at each exporting firm; country of birth for all employees at the firm
- As much demographic information on workers as possible (e.g. education attainment, languages spoken)

CDER Project - Data

CEEDD-IMDB-TEC

- Individual level data
  - T1: Earnings of workers, age, gender, firm identifier
  - IMDB: country of birth, immigration category, landing year, mother tongue
- Firm level data
  - NALMF: NAICS industry codes, revenue, payroll, location
  - TEC: export destination, value of exports, HS6 commodity codes
    - Linked to firms that accounts for $\sim 95\%$ of total Canadian exports
- The ability to work on a merged worker/firm dataset of this size is extremely rare and allows us to answer new and interesting questions!

Student Perspective

- What I liked about the experience and why I recommend doing it

  1. It's fun and challenging! You get to work on massive datasets that have not been extensively used

  2. Learn a bunch of new skills by overcoming the challenges of dealing with data sets of this size

  3. Approach old problems with new, richer data or tackle unanswered questions

- Things you should know?

  1. Process takes time, start early

  2. The data isn't perfect, it takes time to clean the data and organize the data before you can start working on your empirical questions