Exporter Dynamics, Superstar Firms, and Trade Policy

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Firms at the center of globalization

• Open economies tend to grow faster

• Development strategies typically prioritize export growth and diversification

• But countries do not trade, firms do!

• Firms are at the center of globalization and globalization changes firms
Plan for today

I. Firms in international trade – why do we care?

II. The Exporter Dynamics Database

III. Understanding patterns of trade at firm level
   - The role of “superstars”
   - Exporter dynamics
   - Evolution with stage of development

IV. The role of policy for export growth
   - Export promotion
   - Trade facilitation
I. Firms in international trade – why do we care?

Exposure to international competition improves firm performance

Evidence

Exporting firms perform better

Evidence
Firms exposed to trade perform better

- Trade liberalization increases firm productivity: evidence for Colombia and India

- Similar results for Chile, Indonesia, and China
  (Pavcnik, 2002; Amiti and Konings, 2007; Brandt, Van Biesebroeck, Wang, Zhang, 2017)

- Exposure to trade increases firm technology upgrading and innovation
  (e.g., Bustos, 2011; Fernandes and Paunov, 2013)

Note: firm TFP accounts for endogeneity of tariffs following modified Levisohn and Petrin (2003) estimation.
Exporting firms perform better

- Within industries, exporting firms are more productive...
- ...and more innovative, pay higher wages, use more skills and capital, and are less likely to exit
- Interesting debate on self-selection versus learning-by-exporting

II. The Exporter Dynamics Database
Made possible by the growing digitization of customs agencies worldwide

Aimed at improving understanding of the micro foundations of export growth, especially in developing countries
EDD: first database with global coverage of firms that export

EDD version 2.0 released in 2015 for 70 countries mostly during period 2002-2014
EDD: ingredients and measures

• Ingredients: transaction-level customs datasets collected from each country’s customs agency
  • Covering universe of export transactions
  • Following individual firms over time
  • Including for each firm, each product (HS 6-digit) to each destination market in a year, export value and quantity

• More than 100 measures covering:
  • number, size and growth of exporting firms
  • firm concentration
  • firm product and market diversification
  • firm, firm-product, firm-destination dynamics
  • firm unit prices
EDD in support of WB analytical work: examples
III. Understanding patterns of trade at firm level: The role of “superstars”
Exports are extremely concentrated

Very few firms account for a very large share of exports – the “export superstars”

Share of non-oil exports accounted for by top 1% of exporters (2012-2014 average)

Individual firms matter for exports

Superstars influence comparative advantage

Balassa Revealed Comparative Advantage Index

\[ RCA_{\text{country,industry}} = \frac{X_{\text{country,industry}}}{X_{\text{country}}} \times \frac{X_{\text{world,industry}}}{X_{\text{world}}} \]

constructed with and without superstars (top 5 firms)

Out of 32 countries in the EDD, how many have RCA in a specific industry?

What share of countries lose RCA in an industry when superstars are excluded?

In Costa Rica, a single firm (INTEL) was responsible for the emergence of RCA in electrical machinery

Superstars contribute to export growth

Superstars account for an even larger share of export growth over the long-term (>40%)

Contribution of superstars (top 5) – average across EDD countries

Note: average for 5-year [8-year] growth covers 32 [18] countries in the EDD.
What leads to export superstardom?

Some preliminary answers:

• Origins of export superstars in developing countries
  • For 18 countries in the EDD, most are born very large, they never grow from small to the top, they are often foreign-owned, and start exporting shortly after being established (Freund and Pierola, 2018)

• Origins of successful exporters in developing countries
  • For Brazil, more educated leaders with past managerial experience (in large firms) (Bastos and Silva, 2018)
  • For Argentina, foreign market knowledge of leaders gained from living or working abroad (Artopoulos, Friel, and Hallak, 2013)
III. Understanding patterns of trade at firm level: Exporter dynamics
Tremendous churning in export markets

Many firms break into foreign markets but many also exit

Exporter entry and exit rates (2012-2014 average)

Surviving in export markets is a challenge

- Tracking individual entrants, few survive beyond the first year
- Entrants that do survive account for meaningful export growth over the longer term in LAC but not in MENA

Trade costs influence survival of entrants

Survival of entrants beyond the first year is lower where trade costs are higher

Source: adapted from Brenton, Cadot, and Pierola (2012) based on Exporter Dynamics Database version 2.0.

Notes: 2011-2014 averages used. Cost to export is from the Doing Business Database.
III. Understanding patterns of trade at firm level: Evolution with stage of development
Evolution of exporter characteristics with development

More developed economies have:

- More exporters
- Larger exporters
- More concentration of exports in the top 5% of firms

Controlling for the sectoral distribution of exports, destination differences and cyclical effects

Evolution of exporter dynamics with development

In more developed economies:

Exporter entry rates are lower

Exporter exit rates are lower

First-year survival rates of entrants are higher

Controlling for the sectoral distribution of exports, destination differences and cyclical effects

Concentration, dynamics and development

• In countries at lower levels of development, more firms but less resilient firms enter export markets. This is consistent with the hypothesis that informational failures distort firm export entry decisions in developing countries, though entry costs may also be relevant.

• As countries develop, resources are reallocated towards more efficient, larger exporters, resulting in more concentration at the top. This is consistent with the hypothesis that in developing countries distortions inhibit (the emergence of) large firms resulting in a “truncated top” (rather than a “missing middle”).
IV. Role of policy for export growth
How should evidence inform trade policy?

**First do no harm**

- Eliminating restrictive policies – e.g., tariffs, FDI and services barriers, entry restrictions – allows more productive firms to grow [examples](#)

**Then think of doing good**

- *Pro-active* trade policy interventions
  - Market failures: asymmetric information that inhibits exports or imperfections in credit markets
  - Public goods: hard or soft “trade infrastructure,” e.g. ports and customs
- Key questions:
  - Does export assistance help and who should receive it?
  - How can trade costs be reduced?
Positive effects of FAMEX on Tunisian firms’ total exports, numbers of destinations and products in short-term, but effects do not endure.

FAMEX emphasized “low-hanging fruits” (trade fairs) but no improvements in production processes or products.

A change in assistance is needed to promote durable presence in foreign markets.

Effects of export promotion are not durable

Source: Cadot, Fernandes, Gourdon, and Mattoo (2015).

Note: graph shows the percentage change in FAMEX treated firms’ outcome relative to control firms based on estimates from propensity score weighted least squares regressions.
Should export promotion target small firms?

- Small firms did not benefit from FAMEX
- Goldilocks principle?
  - Ongoing effort to identify “marginal” firms using export promotion programs in Chile (Fernandes, Mattoo, and Volpe, 2018)

Source: Cadot, Fernandes, Gourdon, and Mattoo (2015).
Note: graph shows the percentage change in FAMEX treated firms' outcome relative to control firms based on estimates from propensity score weighted least squares regressions (with firm size interactions).
Customs reforms reduce trade costs and foster trade

- High rates of physical inspection by customs act as trade costs
  - Risk-based approach to inspections is a key trade facilitation intervention
- Reduction in inspections in Albania led to declines in expected & uncertainty of customs clearance time and to growth in firm imports

Note: graph shows coefficients on first-difference in median allocation to red channel defined at firm-HS6-country level from regressions with firm-year and HS6-country-year fixed effects.
Take-aways and going forward

• Large firms matter and exporter churning is high
• Need to rethink which firms receive assistance and in what form

• What creates export superstars and can policy help?
• How do superstars affect workers and inequality?
• Can we identify firms which would use assistance for export success?
• Can assistance promote not just entry but survival?
• What are cost-effective measures for reducing trade costs?

• New data on inter-linked dimensions of globalized firms, GVC participation and employment
• Deeper collaboration with operations on evaluating the impact of policy
Website & references


