

A Search and Learning Model of Export Dynamics

Eaton, Eslava, Krizan, Kugler, & Tybout

Discussion by Costas Arkolakis

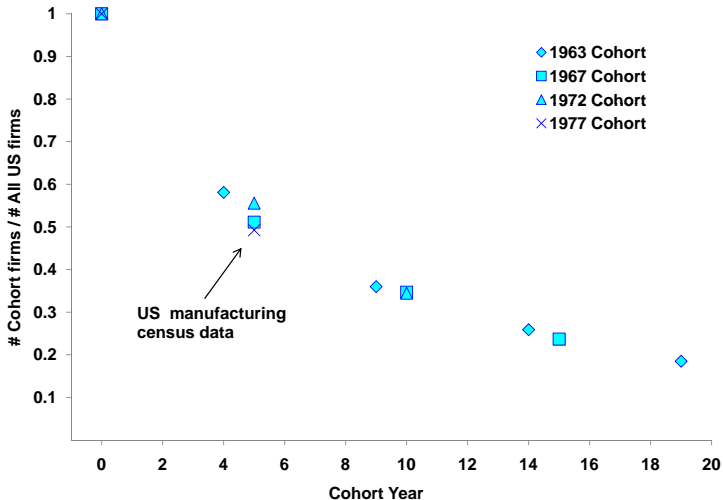
Yale University & NBER

May 2009

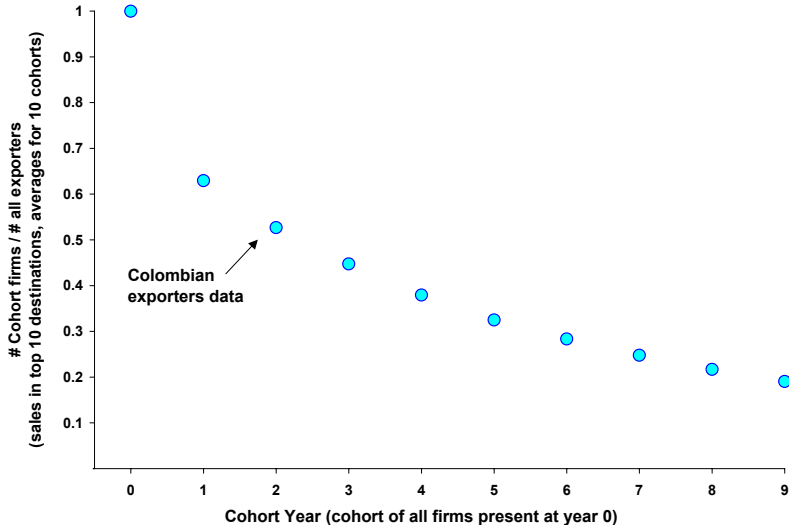
Big Picture

- Exciting era for trade theory: firms & trade
- Exciting EEKKT agenda: Establish new facts on firm **dynamics**
 - Large turnover of small exporters
 - Large growth rates of small exporters
 - Entrants and Exitors typically small

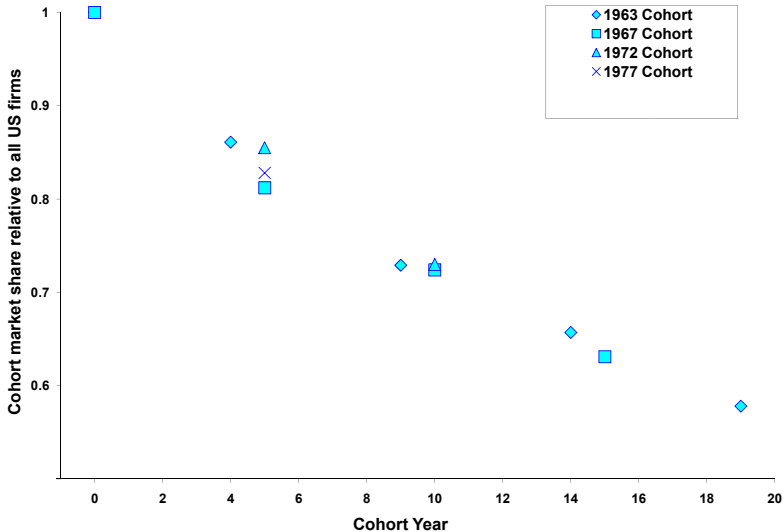
Survivors Market Share in the US Census



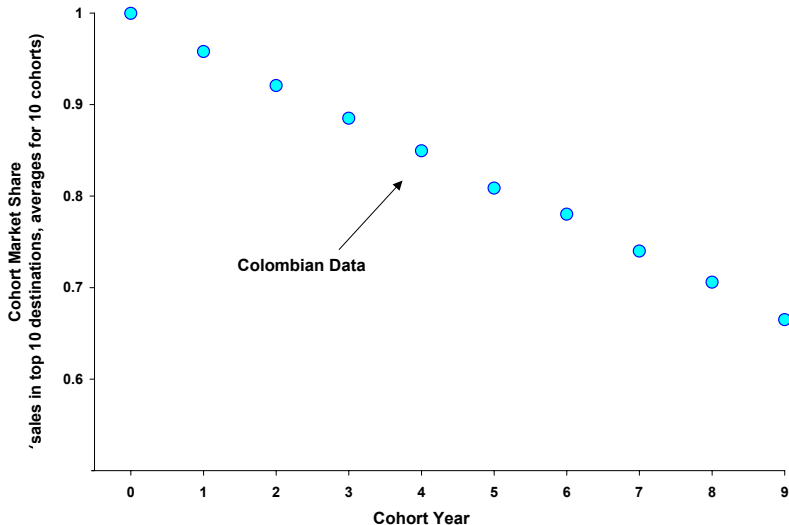
Fact 1: Large exit rate of exporters in a destination



Survivors Market Share in the US Census



Fact 2: In a decade, new exporters large part of trade



Potential Contribution

- Rich data can identify right modeling assumptions
 - Favor a theory of firm-productivity dynamics (ala Hopenhayn)
 - But too much turnover in the first year!
 - Learning can help us explain this fact
 - Learning can explain growth as a function of age (conditional on size)

Why searching and learning together?

- Modeling subtlety
 - i. Searching alone probably not enough to match 1st year turnover
 - ii. Learning alone no value (no reason for adjustment of sales!)

So what do we Learn from “Learning”?

- EKK, EEKKT present striking findings:
 - Many really tiny exporters and really tiny entrants
 - Size of entrants and exitors almost the same
- Data put doubts on assumption of sunk costs (as currently modeled)
- Learning can create a “sunk cost” behavior (generates irreversibility)

Two main counterfactual experiments

- Productivity shocks alone can match exporter turnover & growth
- Model with learning overqualified to simply do this
 - Its real value in counterfactual experiments
- Counterfactual 1: Exporter behavior and exchange rate movements
 - Is irreversibility created by persistence in matches...

Two main counterfactual experiments

- Productivity shocks alone can match exporter turnover & growth
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 - Its real value in counterfactual experiments
- Counterfactual 1: Exporter behavior and exchange rate movements
 - Is irreversibility created by persistence in matches...
 - Or the sales within the matches?

Two main counterfactual experiments

- Productivity shocks alone can match exporter turnover & growth
- Model with learning overqualified to simply do this
 - Its real value in counterfactual experiments
- Counterfactual 2: Trade Liberalization
 - Why growth of trade is slow?
 - Modeling export surges: further complications (learning spillover?)

Across Matches and Within Matches

- The truth for firm Growth is in the matches!

Across Matches and Within Matches

- Matched data can help us figure out the mechanics of export growth
- Here is an example:
 - If sales in matches not correlated growth similar to Kortum Klette
 - If sales in matches perfectly correlated similar to Luttmer
 - In the first case variance declines by rate $\propto 1/\text{firm size}$ in the second it might actually increase (due to selection)!

A Robustness Check for Learning

- A way to check how much of a “kick” learning gives
- Take N (correlated) stochastic processes
- Look at their behavior (turnover and growth)
 - Does it look like turnover & growth of within firm matches?
 - Can you replicate the behavior of the EEKKT model?