Learning to export

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September 7, 2013

A powerful correlation

- Exporting firms are better:

LHS Variable	Beta
Gross fixed assets	1.1 (0.036) ***
Wages	1.33 (0.033) ***
Sales	1.55 (0.039) ***
Investment	1.08 (0.07) ***
Total assets	1.22 (0.034) ***
Total factor productivity	0.05 (0.007) ***

- Cross-sectional and panel regressions: Very strong results.
- Bigger, higher productivity, pay higher wages, etc.

Could this be exploited?

- If a country wants to do better, perhaps we could foster exporting?
- A seductive story:
  1. Purely domestic firms in India face low competition, low demand for sophisticated products
  2. By stepping into the world market, they face high competition and reap economies of scale in building sophisticated products
  3. Therefore, we should be willing to do all sorts of things to push more firms into exporting
  4. This will generate growth, productivity, higher wages.

Policies that favour export promotion

- Export promotion policies e.g. Ministry of Commerce
- Subsidies for exporting firms
- Exchange rate undervaluation: on one hand this distorts monetary policy, but on the other hand it fosters exporting.
- Justification for 'Bretton Woods 2': close the capital account, financial repression, run an undervalued exchange rate, get high growth in exports.
- By forcing more firms to engage with globalisation, we facilitate the flow of *ideas* into the domestic economy.

How the argument might become different in India

- Protectionism and non-trade barriers: Maybe going out into the world economy has a *bigger* impact in India.
- A big local market, no problem with economies of scale for products that are purchased in India : Maybe there will be a smaller effect in India for some products.
- But India may be a small market for many sophisticated goods.

The problem

- Correlation and not causation.
- Three different causal stories could be at work:
  1. Maybe more productive firms export
  2. Maybe firms choose to push up their own productivity and then they are able to export
  3. Or maybe years spent exporting induces learning and then productivity goes up.
- An active literature, with different results in different datasets and methodologies.

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Jargon:

1. 'Helman-Melitz-Yeaple (HMY)' or 'Melitz Model': Firm productivity is immutable; more productive firms export.
2. 'Learning by exporting' (LBE) hypothesis.

How to tease out causal effects?

- Watch for firms that jump up from non-exporting to exporting.
- Do an event study around this. Does productivity go up before or after the event date? Given enough data, this shows causal ordering.

Methodological issues

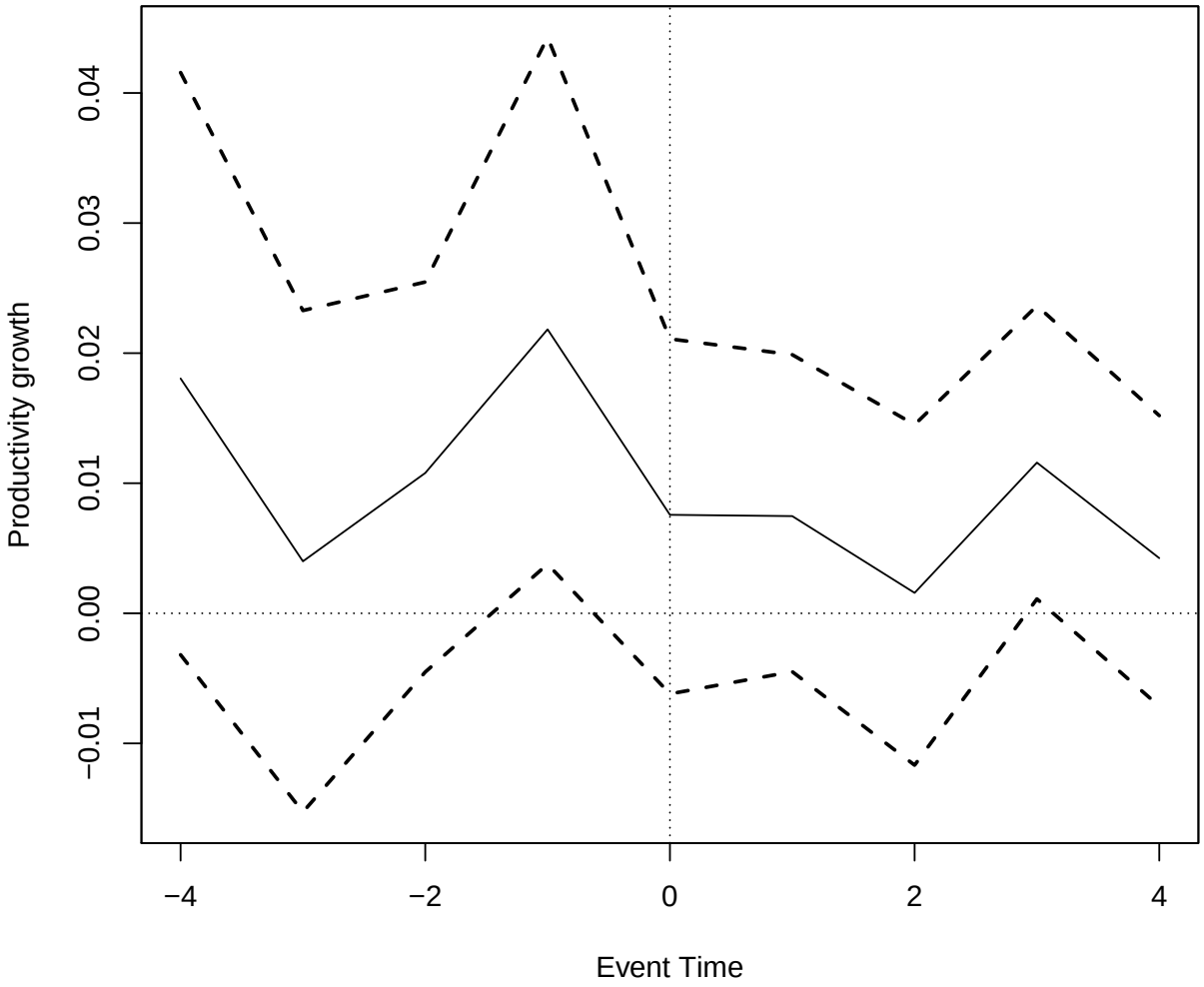
- *Problem*: Many firms flip-flop (10.5%, 7.4%). Maybe the exporting helps productivity only after sustained engagement with the world market.
  Solution: Filter down to a clean trajectory of 0,0,0,0,0,0,0 for the control and 0,0,0,1,1,1,1 for the exporters.
- *Problem*: You'd need to see a lot of events to obtain sharp estimates. *Problem*: Better firms self-select to export; the outcome is merely selection bias.
  Solution: Reduce variance by having a similar control (propensity score matching in each year). Matching on observables.

Summary: *event time / event study analysis* of *difference in difference* estimates based on *propensity score matching*.

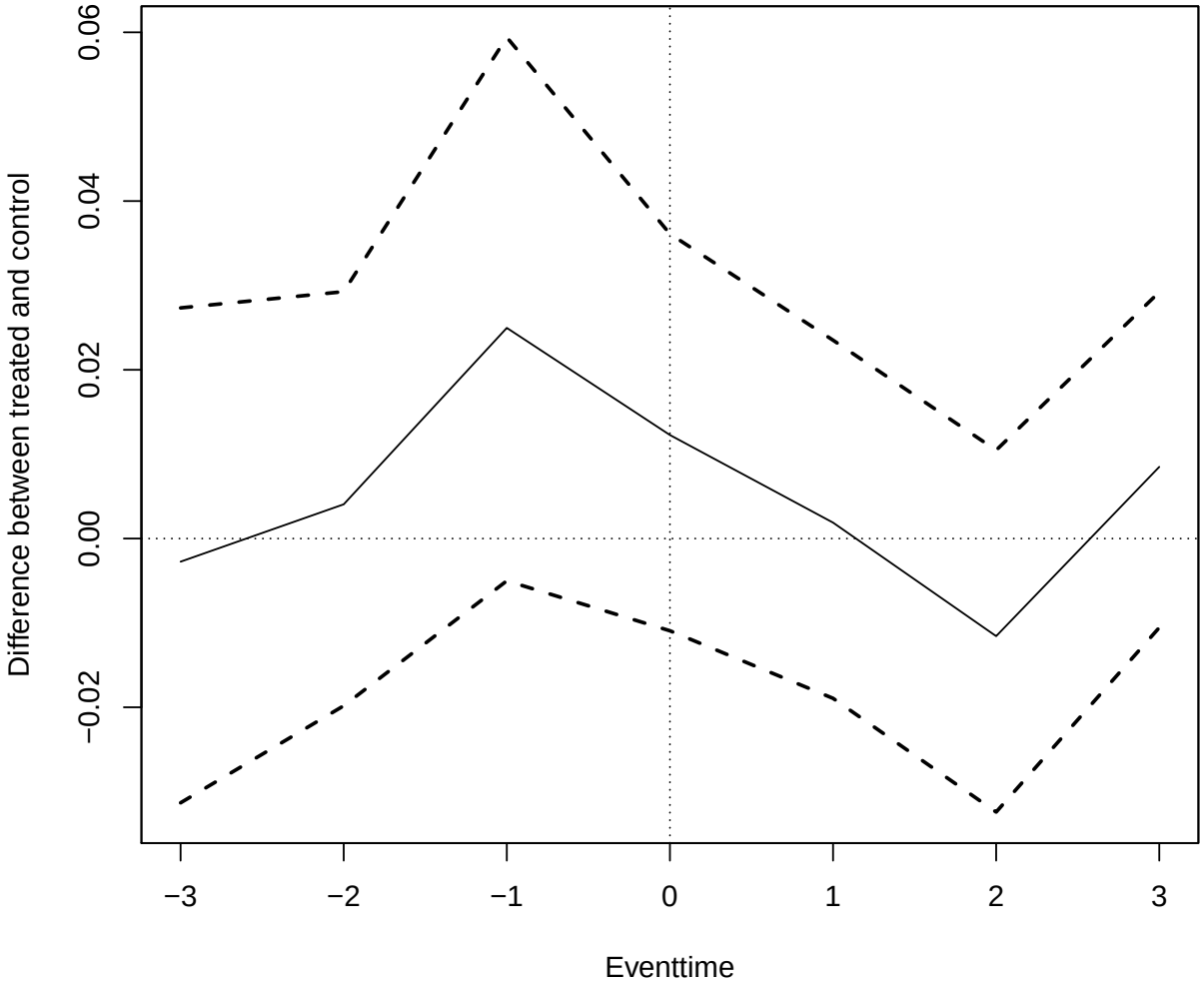
India is a great lab

- We want to see controls which are observed for 7 consecutive years with zero exporting.
- We want a large pool of controls in order to get high quality match balance.
- We want to see numerous firms jump up into exporting and stay there.
- India : 1990-2011.
- CMIE Prowess dataset: 10,685 manufacturing observed for atleast 1 year.
- Hunting through these, we get 280 high quality observations.
- Key intuition: Pure observational data has many problems. It cannot be used as is. It is raw material from which to construct quasi-experimental designs which yield the desired causal effects.

Event study for export starters alone



Difference in difference estimates



Conclusion

- Some firms seem to push up their productivity *before* exporting.
- Policies that favour firms that *presently* export are influencing the wrong set of firms.
- We should be very careful in our econometrics and its interpretation.
- A whole bunch of questions:
  - We are not in a Melitz model world.
  - Why do some firms raise their productivity and then do exporting?
  - Could it be that all firms try and some succeed?
  - Should governments discontinue all export promotion, or are there some things that governments can do?

Thank you.