Discussant Comments

Gupta, A., I. Patnaik and A. Shah (2015). "Exporting and Firm Performance: Evidence from India"

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Exporting and Productivity

- Firm exports and productivity – one of the most extensively examined relationships in trade literature

- General findings from trade literature: "Exporters more productive than non-exporters"
  - Do firms learn-by-exporting (LBE) that makes them more productive? i.e. Does exporting have a *causal impact* on productivity?
  - LBE hypothesis – cited as the basis for policy interventions geared towards export promotion
    - But does LBE hold? Literature inconclusive.
    - Enter Melitz (2003) → Self selection.

Exporting and Productivity

- Melitz (2003) → export behavior and productivity through self-selection
  - As trade costs decline, only the more productive firms are in a position to expand and they self-select into export markets, whereas the less productive firms exit the market.
  - Literature: Evidence for self-selection 'strong'.
  - LBE for developing economies – 'Mixed.'

  "The standard models of modern trade theory… are based on the notion that firms are heterogeneous, productivity is immutable, and the most productive ones self-select themselves into exporting. If this model is correct, then policy interventions are futile as firm productivity cannot change" (Gupta et al., 2015, p.1)

→ ***Focus of this paper: Self-selection and LBE in India***

Exporting and Productivity

- The closest paper in spirit to Gupta et al. (2015) is Mukim (2011).

Table 1: Summary of empirical findings on exports and productivity

Study	Country	Sample	Methodology	Evidence*	
				$\omega^{e} > \omega^{ne}$	LBE effects
Aw and Hwang (1995)	Taiwan	2,832 firms; 1986	Translog production function, cross-section	√	x
Bernard and Wagner (1997)	Germany	7,624 firms; 1978-92	Panel Data	√	√
Clerides et al (1998)	Colombia, Mexico, Morocco	All firms; 1981-91, 1986-90, 1984-91	FIML of cost functions; Panel data	√	√[1]
Kraay (1999)	China	2,105 firms; 1988-92	Dynamic panel	√	√
Bernard and Jensen (1999)	US	60,000 plants; 1984-92	Linear probability with fixed effects	√	x
Kim (2000)	Korea	36 sectors; 1966-1988	Translog production function; cross-sections	√	x
Isgut (2001)	Colombia	6453 plants; 1981-1991	Difference-in-Differences methodology (with dummies)	√	x
Delgado et al (2002)	Spain	1,766 firms; 1991-96	Nonparametric analysis of productivity distributions	√	x
Castellni (2002)	Italy	2,898 firms; 1989-94	Cross-section	√	√[2]
Wagner (2002)	Germany	353 firms; 1978-89	Panel data; Matching	√	x
Alvarez and Lopez (2005)	Chile	5,000 plants; 1990-96	Ordered probit; pooled data	√	√
Baldwin and Gu (2003)	Canada	8215 firms; 1974-1996;	System GMM; Cross-sections	√	√
Arnold and Hussinger (2004)	Germany	389 firms; 1992-2000	Olley and Pakes production function; Matching techniques	√	x
Bigsten et al (2004)	Cameroon, Ghana, Zimbabwe	289 firms; 1992-1995	Maximum likelihood, System GMM methods; Panel data	√	√
Girma et al (2004)	UK	8,992 firms; 1988-1999	Matched samples	√	√
Hung et al (2004)	US	40 industries; 1996-2001	Difference-in-Differences Methodology; Panel data	√	x
Blalock and Gertler (2004)	Indonesia	20,000 firms; 1990-1996	Translog, Olley and Pakes, Levinsohn and Petrin production function;	√	√

Novelty of Gupta et al. (2015)

- Uses Prowess data of large Indian manufacturing firms between 1994 and 2014.

- Time period covers firms transitioning from domestic market to exporting – permits analysis of firm productivity using "before and after" (exporting) event study.

- Sample: 8275 firms; 3510 non-exporters (sustained)
  - Propensity score matching (PSM): export starters to non-exporters.

Summary of Key Results

- Export-Starters are:
  - Bigger in size
  - Younger in age
  - Better in paying higher wages
  - More productive *prior to exporting*
- No "conscious" effort to improve productivity before exporting.
- Exporting has positive impacts on size.
- No evidence of LBE
- Consistent with Melitz model – More productive firms self-select; Firm productivity is "immutable."

Comments/Questions

- **Data →** 1994-2014. Is it robust to sub-periods?
  - Pre-GFC period of 2000-2008: Indian manufacturing underwent significant restructuring → 'J-Curve of Productivity and Growth' (Virmani, 2011).

- **Table 2 →** How are the various categories used in the empirics? Not clear.

Comments/Questions

Methodology:

- Olley-Pakes (OP) method to estimate TFP as robustness?
  - Intermediate inputs (Levinsohn-Petrin) vs. investment (OP) to control for simultaneity between inputs and outputs?
  - Controls for the endogeneity of firm exit by computing survival probabilities for the firm
  - LP procedure uses value added data? – Sales rather than output/production?

Comments/Questions

Methodology:

- Caveats about PSM techniques should be highlighted. Du et al., 2011 (p.11):
  - "Conditional Independence" for the variable of interest, i.e., exporting decisions of non-exporters are randomly made conditional on the full set of observable characteristics of the firm – strong assumption.
  - Propensity score obtained only on the basis of observable firm characteristics. Assumes away possible problem with the error terms – endogeneity and/or measurement error.
  - Estimates provides productivity differential between exporters and non-exporters within a given industry, and says nothing about the within-firm effect of exporting on productivity.

Comments/Questions

Methodology:

- Mukim, M. (2011): Within-firm estimate that gives the effect of entry into export markets on aggregate firm productivity after controlling for the self-selection problem.
    - Instrument that affects firm productivity only through its effect on the firm's decision to export, and which would be exogenous to changes in firm-level productivity
    - Instrument: Effectively applied tariffs faced by exporting firms

Comments/Questions

- Any effects of financial constraints on exporting performance?
    - Are exporters able to get more credit for expansion? During crises, export-oriented firms are less credit-constrained than non-exporters?

Comments/Questions

- Exporters grow more than non-exporters but no productivity increase -- this implies that they grow by increasing inputs, i.e. hiring more resources?
  - Can we tell if they are more or less labour intensive than non-exporters? Since wage bill rather than number of workers is used -- do we know if exporters actually hire more or pay higher unit wages?

Comments/Questions

- **Policy** → If exporting leads to greater growth and given the existing labor market and other rigidities that limit firm growth in India, in this second best world what would the policy suggestion be?
  - Concluding section is weak on policy implications.

References

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Thank You!