Exporting and Economic Performance: Firm-Level Evidence From Spanish Manufacturing
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Discussion
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Outline

The questions

The ways through the answers

The answers

Comments
The questions

Are exporting firms different from the non-exporting ones?

Country studies on firm- and plant-level data say:

• Exporters outperform non-exporters in various aspects (size, sales, TFP, capital intensity, wages, skill intensity, etc.)

• Exporters are a minority, and sell most of their output domestically

1. Do these differences hold for Spanish manufacturing?
The questions

Why are exporters different from non-exporters?

Theory says:

- Exporting firms need to be more efficient to afford the cost of being exporter: self-selection (e.g.: Melitz, 2003, BEJK, 2003)
- Exporting firms become more efficient due to learning by exporting

2. Self-selection or learning-by-exporting? ...or both?
Ways through the answers

Data from the ESEE: 1403 firms surveyed in 1990-1999, 10145 obs.

Ways through Q1.: 

- Statistics 
- Mean comparisons 
- Static panel estimates with time and industry fixed-effects

\[ \ln X_{it} = \alpha + \beta \text{Export}_{it} + \Lambda'Z_{it} + \sum \gamma_i \text{Industry}_i + \sum \delta_i \text{Year}_i + \varepsilon_{it} \]

Note: \( \beta \) is not about causality 

if \( \eta_i \) were added, \( \beta \) would be a Diff-in-Diff estimator
Ways through the answers

Ways through Q1. (cont’d):

- Dynamic Panel Data approach to TFP estimation (SYS-GMM)

\[ \Delta y_{it} = \alpha + \rho \Delta y_{it-1} + \delta (L)' \Delta Z_{it} + \Delta \upsilon_{it} \]

\[ y_{it} = \alpha + \rho y_{it-1} + \delta (L)' Z_{it} + \eta_{t} + \upsilon_{it} \]

Note: \( \upsilon_{it} = (1-\rho) \eta_{i} + \epsilon_{it} \) is TFP of firm \( i \) at time \( t \)

\( \eta_{i} \) is the fixed firm-specific component of TFP

replace \( \eta_{i} \) with Export\(_{i} \) to get the extra-TFP of EXP vs N-EXP

Export status is assumed fixed over time (firm \( i \) entering in 1994 counts as Exporter in 1990-1999)
Ways through the answers

Ways through Q2.:

- Dynamic Panel Data approach to TFP estimation (SYS-GMM)
  - replace $\eta_i$ with Continuing Exporter$_i$ and Entering Exporter$_i$
    Positive coeff on EE $\rightarrow$ Self-selection holds (EXP are more productive than N-EXP at all times, even before becoming EXP)
  - replace $\eta_i$ with High Export Intensity and Low Export Intensity
    HEI $>$ LEI $\rightarrow$ Learning-by-exporting holds (more exposure to export, more learning, higher TFP)
Ways through the answers

Ways through Q2. (cont’d):

• Static panel regressions for $\Delta TFP$

• Matching on propensity score
  
  – probit for the likelihood of firm $i$ becoming exporter
  
  – predict $p_i$
  
  – match $i \in \text{EXP}$ with $j \in \text{N-EXP}$ s.t. $p_i - p_j = \min \{|p_i - p_k|\} \ \forall \ k \in \text{N-EXP}$
  
  – run static panel regressions for $\Delta TFP$ in the sample of matched firms

Positive coefficient on Export $\rightarrow$ learning-by-exporting holds
The answers

Q1. Also in Spain:

- Exporters outperform non-exporters in: size, sales, TFP, capital intensity, wages, skill intensity, R&D activity and effort
- Exporters are a minority, and sell most of their output domestically

Q2.

- Self-selection into Export status holds
- Learning-by-exporting does not hold (at least non-robust)
Comments

Hot topic, interesting data, well-done analysis

- Why not exploiting time dimension of Export status even in the DPD? $\text{TFP}_i$ need not be constant as your $\text{Export}_i$

- Why not trying Diff in Diff approach? (add firm fixed effects)

- TFP: neither index nor DPD estimates account for human capital or skill intensity, while you show skill intensity is higher in exporters. Worth controlling for it.

- Why not controlling for exported volumes as continuous variable?

- Explore other effects of exporting, e.g.: reallocation of factors from N-EXP to EXP in each industry. This means higher sectoral TFP (evidence in Bernard and Jensen, 2004 and Pavcnik, 2002)
Comments (minor details)

• t-stat in the mean comparisons would be of help (are all differences significant?)

• Sargan and m2 tests are not always super (take a further look at it)

• Estimates for ΔTFP look a bit uninformative: mis-specification?