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Method
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Further research
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Margins of Trade: Czech Firms During and After the Crisis - A Discussion

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Disclaimer: The views expressed are those of the author and do not necessarily
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Research questions

- International trade is an important element of the Czech economy (degree of openness of 162 per cent in 2015). Therefore, the study of trade margins is useful.

- How have different margins (firm, product, country) explained export growth in the Czech Republic in the period 2006-2014?

- Is there an effect associated with the 2008-2009 crisis/great trade collapse?

- Were firm's with stronger involvement in GVCs more affected?

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Literature

Trade margins

- Transaction-level data allows for the breakdown of firm's exports along extensive and intensive margins of trade, thus considering participation, number of goods traded and the number of countries served.

- These margins and the links with characteristics of the firms and dimensions of their performance have been investigated in the literature.

- Initial contribution on multi-product firms and product switching by Bernard, Jensen, Redding and Schott, AER, 2009.

- Further applications are surveyed by Wagner (ROWE, 2016). Presents a tabular survey of 147 empirical studies for 39 countries, plus 8 studies for multiple countries.

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Literature

Trade collapse and GVCs

- The trade collapse mostly affected the intensive margin (fixed costs of entering) and was larger in intermediates (Beltramello, Backer and Moussiegt, OECD WP, 2012)

- The "Bullwip effect" of GVCs points to a strong impact of crisis on intermediates (Altomonte, Di Mauro, Ottaviano, Rungi and Vicard, ECB WP, 2012)

Method

Simple breakdown (Amador and Opromolla (2013), ROWE)

$$\Delta Y_t = \sum_{j \in N} \Delta Y_{jt} + \sum_{j \in X} \Delta Y_{jt}$$
$$+ \sum_{j \in C} \left[\sum_{z \in AD} \left[\sum_{v \in OP} \Delta Y_{vzjt} + \sum_{v \in NP} \Delta Y_{vzjt} \right] + \sum_{z \in DD} \Delta Y_{zjt} \right]$$
$$+ \sum_{j \in C} \sum_{z \in CD} \left[\sum_{v \in AP} \Delta Y_{vzjt} + \sum_{v \in DP} \Delta Y_{vzjt} + \sum_{v \in CP} \Delta Y_{vzjt} \right]$$

Where: ΔY_t is the change in exports, N entering exporters, X exiting exporters, C continuing exporters, AD added destinations, DD dropped destinations, CD continuing destinations, AP added products, DP dropped, CP continuing, OP old products, NP new products.

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Method

Weighted regressions (Bricongne et al., 2012)

- Estimate a weighted regression with the growth rate of elementary trade flows on dummies for various margins and categories.

- In order to identify all coefficients, impose that the weighted sum across each characteristic equals zero.

- It is a flexible approach and does not depend on the ordering of the effects.

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Results

Sizeable role of extensive margin before the crisis

- The intensive margin has driven the growth rate of exports, in line with the existing literature.
- The contribution of the extensive margin declined in the post-crisis period (2010-2014), driven by the country contribution and, mostly large firms (p95-p100).
- Share of net extensive margin on overall growth:
  2006-2007 -> 5% out of 12.9% -> 39%
  2008-2009 -> -0.2% out of -8.9% -> 2%
  2010-2014 -> 2.9% out of 9.8% -> 30%
- Lower rate of convergence of the Czech economy?

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Results

Size, destination and GVCs

- As expected, the net firm margin was driven by large firms

- After the crisis, the lower net firm margin was driven by euro area exports and intermediate and capital goods.

- Limited creation of new GVCs in Europe and disappointing performance of investment?

- Firms involved in GVCs (with import intensity > 50%) were hit harder by the crisis -> Propagation of shocks.

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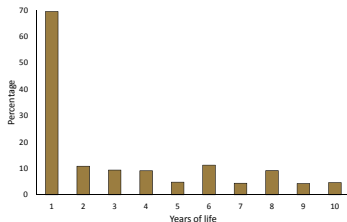
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Suggestions for further research

Look at cohorts and scarring effects of the crisis - Average
cohort mortality rate of exporters and growth rate of exports,
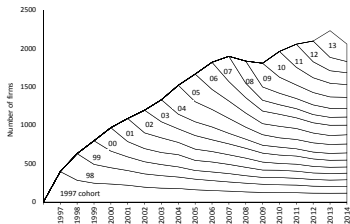per year of life (PT exporters of goods 1996-2015)
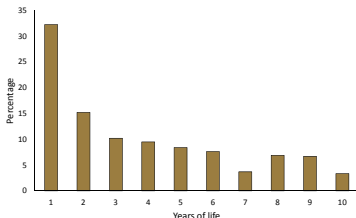
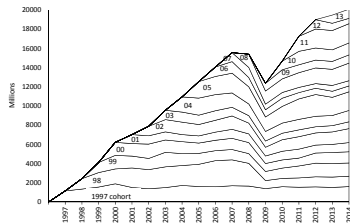Mortality rate   Growth rate of exports per firm

Suggestions for further research

Look at cohorts and scarring effects of the crisis - Number of
exporters and value of goods exports per cohort in each year
(PT exporters of goods 1996-2015)

Number of exporters   Value of Exports

Suggestions for further research

Services trade

- Upon the existence of firm-level (non-tourism) services exports data the margins can be computed.
- Though, there is a low number of services categories.

Other

- Investigate the unit price dimension (price vs real effects).
- There is still a lot to do in terms of modelling firms export decisions along the different margins.

Look at the import side

- What is the relative importance of the different import margins?
- Are they synchronized with export's margins?