Of chicken and eggs: Exporting, innovation novelty and productivity

EXECUTIVE SUMMARY

It is well-known that exporting firms are more productive, but it is less clear why. In this TPI Working Paper, we interrogate the complex interlinkages between exporting and export persistence, innovation and innovation novelty, and productivity.

We use data on a large, unbalanced panel of UK firms and our econometric method allows us to identify the causal mechanisms in these relationships.

The ONS estimated that in 2016, only about 5% of all UK firms were engaged in international trade. These firms were, however, around 20% more productive than non-trading firms, and they accounted for over 40% of employment. Why is this? Is it simply that more productive firms export (the Learning to Export hypothesis), or is it exporting which leads to higher productivity (the Learning by Exporting hypothesis)?

Innovation plays a key role here: it allows firms to develop products and services suitable for exports and, once they export, they have access to new ideas and information from foreign markets, with which they can further innovate.

However, not all innovations are created equal, and not all firms export consistently.

Our findings based on analysis of the longitudinal element of the UK Innovation Survey suggest that:

- Innovations that are truly novel and new to the market or industry drive exports, but innovations that are only new to the business do not. This suggests that invention, not adoption, drives exports.
- Exporting, in turn, drives both forms of innovations, encouraging both invention and adoption. However, not all exporting firms experience these positive interlinkages between innovation and exporting- only those that export persistently over time. This suggests that consistent exposure to foreign markets is crucial for any learning effects, and firms that export intermittently lose out.
- In terms of productivity, our findings show a direct positive impact of exporting on productivity. However, innovation has only an indirect effect on productivity through its positive links with exports. That is, innovation increases productivity only for exporting firms.

LTE Learning To Export

More productive firms self-select into exporting because they are better able to bear the sunk costs associated with export market entry. They learn by ramping up productivity within their domestic market setting, with innovation a key role.

LBE Learning By Exporting

Before starting to export, firms gain access to new sources of knowledge eg. foreign clients, export intermediaries and competitors. Exporters can use this privileged knowledge to enable the introduction of new or improved products and a subsquent increase in productivity.

THE PRODUCTIVITY INSTITUTE

To read more about the research synthesised in this Policy Briefing and for a full list of sources, please read The Productivity Institute Working Paper Of chicken and eggs: Exporting, innovation novelty and productivity by Halima Jibril and Stephen Roper, from Warwick Business School and the Enterprise Research Centre.

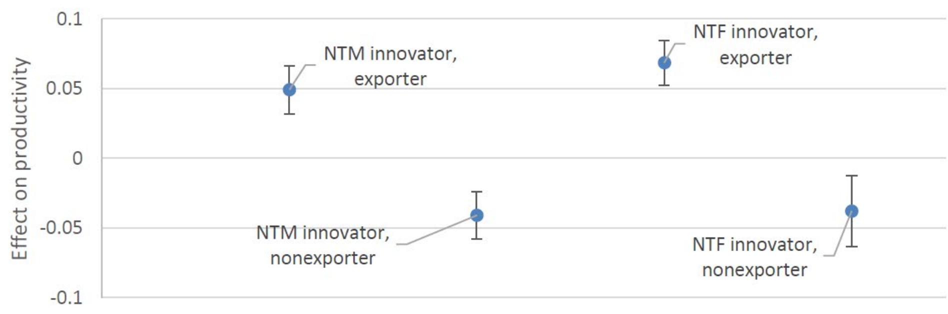
ERC Enterprise Research Centre

Of chicken and eggs: Exporting, innovation novelty and productivity

THE PRODUCTIVITY INSTITUTE

EXECUTIVE SUMMARY

Figure 1: The productivity effects of innovating: Exporters vs non-exporters



NTM New To Market
Radical innovations
Incorporate a substantially different core technology and provide substantially higher customer benefit' relative to existing products within an industry.

NTF New to the firm,
Incremental innovations
improvements, adaptations or extensions while maintaining the basic essence of the product.

POLICY IMPLICATIONS

1. The benefits of innovation support measures with the aim of stimulating exporting are greatest for firms that already have a technological advantage in the domestic market and are achieving greater sales from their radical innovations. This suggests that identifying companies which are domestic market leaders but not exporting and targeting these firms for export support may create the greatest productivity improvements through greater and faster returns on their innovations (Figure 1).

2. To support the cultivation of a more innovative economy more generally, export support policies should explicitly incorporate the exploration of foreign knowledge sources as a deliberate policy objective, since exporting enhances both new-to-market and new-to-firm innovations. Our analysis by firm size suggest that smaller firms may be in a better position to translate the learning from export markets into innovations, or to at least benefit more from that learning.

3. Export promotion policies should encourage sustained and committed engagements with export markets in order to maximise the value of learning.

4. Policies can be tailored to firms in both manufacturing and services sectors; the positive links between innovation and exporting tend to larger for firms in the manufacturing sector, and firms in services display strong productivity benefits from their exports.

THE PRODUCTIVITY INSTITUTE

To read more about the research synthesised in this Policy Briefing and for a full list of sources, please read The Productivity Institute Working Paper Of chicken and eggs: Exporting, innovation novelty and productivity by Halima Jibril and Stephen Roper, from Warwick Business School and the Enterprise Research Centre.

ERC Enterprise Research Centre