Abstract

Learning based trade theories face a growing acceptance in the international trade literature as they provide an explanation for a large number of observed dynamics in export markets and particularly for the inverse relationship between export growth and export experience. These theories explain the age-growth dependency by suggesting that firms face a significant level of uncertainty when they engage in export markets. Due to this uncertainty, firms are reluctant to commit too much when they start exporting, which result in them supplying small quantities or to a small number of destinations initially. However, as firms learn about their export costs, demand and profitability, they adjust their export behaviour with respect to the destinations, products and quantities. If firm learn ex post that their export activities are profitable, they will have greater confidence and bolder export behaviour, while the opposite is true if firms find that they have overestimated their market potential ex ante. As young and less experienced exporters are likely to face higher levels of uncertainty, their adjustments are expected to be more frequent or drastic than those of their mature counterparts.

Against the background of the existing learning literature, this paper aims to provide new evidence for the impact of multiple measures of export experience on export growth and hence for the relevance of uncertainty and learning in export markets. The empirical analysis in this work is based on a large firm-level dataset of an exporting powerhouse – China. The dataset contains export information for more than 100,000 firms from the manufacturing sector and covers the time period 2000-2009. Most importantly, it provides information on the volume of export sales per firm, product and destination. To our best knowledge, this paper is the first work that empirically analyses a decade of Chinese firm and product level data in the context of the learning literature at the intensive margin.

Previous literature has provided a fair amount of evidence for the existence of an inverse relationship between export experience and export sales growth. However, most of these analyses focus on a general dependency of growth on age. An aspect that is often ignored is learning across destinations. A recent work by Albornoz et al. (2012) has bucked the trend. Their theoretical model is built on the assumption that export profitability and consequently the firm’s uncertainty level are not only correlated across time but also across destinations. Therefore, new exporters learn not only about the first market when they start exporting, but also about future export destinations. This implies that the level of uncertainty faced by a firm is at its highest in the earliest periods in the firm’s first export destination. Albornoz et al. (2012) and Nguyen (2012) suggest that uncertainty – at least parts of it – can be uncovered by learning from exporting to previous destinations. While Albornoz et al. (2012) provide support for the relevance of learning across destinations, their empirical approach does not allow for any detailed inferences about how experience from previous destinations affects export sales growth over time and hence if learning processes are abrupt or gradual.

This paper is built on the work by Albornoz et al. (2012) and expands it in several dimensions. First, we extend the framework of learning in the first export destination as well as in the first year in a given destination to allow for learnings in multiple destinations and over multiple years in a given destination. This paper explicitly
examines the patterns of export growth as firms expand their activities to new destinations and as they remain active over multiple years in a given destination. Second, the paper expands the analysis to the product level. While differences in the destination specific growth rates could result from the addition of new products (extensive margin) or from quantity changes with respect to existing products (intensive margin), product level growth rates explicitly cover the change in the sales of a given product. Therefore, the product level analysis in this paper can provide explicit insight if the growth rate of product specific sales is affected by the firm’s experience. The product level analysis also allows for some inferences about the role of product specific experience and can hence shed some light on the relevance of different types of uncertainty. In this paper, we examine how firms react to uncertainties due to governance quality and export volatility at both the destination and product levels.

We find strong evidence of an inverse relationship between export growth and experience at multiple levels. One key finding is that learning is multidimensional and a gradual process where the growth rate of destination specific export sales decreases as firms gain experience within and across destinations. For instance, our most extended model considers the growth patterns across the first three export destinations of a firm and for the first three years in a given destination. Based on this model, we find that the initial growth in earlier destinations is on average higher than in later destinations. First year growth rate in the first export destination is approximately 60 percentage points higher, the initial growth rates in the second and third destinations are approximately 28 and 12 percentage points higher, respectively, than the baseline. At the same time a decreasing growth pattern is observable over time within each of the first three destinations. The first, second and third year growth rates in the first export destination are around 63, 31 and 7 percentage points higher, respectively, than the baseline. As regarding the influence of various drivers of uncertainty, the empirical findings indicate that learning patterns are less distinct when export destinations feature a high level of institutional quality. Lastly, we find that the growth rate of product level sales is affected by both firm level experience and product specific experience.

References
