

QUALITY SORTING AND TRADE: FIRM-LEVEL EVIDENCE FOR FRENCH WINE

Matthieu Crozet, Keith Head & Thierry Mayer

NON-TECHNICAL SUMMARY

Since firm-level data on trade have become available, researchers have documented overwhelming evidence of dramatic differences in export performance. Most firms do not export; the few that do tend to export relatively small shares of their output and export to only a handful of destinations (see for instance Bernard et al. 2007, and Mayer and Ottaviano 2007). Only the highest performing firms export substantial amounts to large sets of destinations. While the fact of performance differences is well-established, the source of this heterogeneity remains unclear.

Theoretical papers following the seminal work of Melitz (2003) mainly assume that the sorting of firms into export markets depends upon individual productivity draws. However, the proxies used for measuring productivity differences, such as value-added per worker (Bernard and Jensen, 1999) or sales in the home market (Eaton et al., 2008, and Yeaple, 2009) could be driven by primitives other than physical output per unit of input. Casual observation suggests that product quality differences are important in many industries. Presence and performance in foreign markets could therefore be driven by quality sorting, productivity sorting, or a combination of the two. However, the precise quantification of the role of quality in explaining trade outcomes has been hindered by the lack of direct measures of quality, forcing reliance on proxies such as unit values.

This paper studies the exports of Champagne producers, where firm-destination export flows can be matched to firm quality ratings from wine guides, like Parker's. Firm-level regressions illustrate how directly measured quality affects the prices firms charge, the set of countries to

which they export, and the amounts they export to each country. We show that high quality producers export to more markets, charge higher prices, and sell more in each market. More attractive markets are served by exporters that, on average, make lower rated Champagne. Market attractiveness has a weakly negative effect on prices and a strongly positive effect on quantities, confirming that quality sorting is important for the Champagne industry. Since our model and estimation methods were not tailored for application to this industry, we believe they can be usefully applied in other settings.

Methodologically, we make several contributions to the literature. First, we propose an estimation method for regressions of firm-level exports on ability measures and use Monte Carlo simulations to show that it corrects a severe selection bias present in OLS estimates. Second, we show how the means of quality, price, and quantity for exporters to a given market can be used to recover estimates of core parameters (which we compare with firm-level estimates) and discriminate between productivity and quality-sorting versions of the Melitz model. Our new method regresses country means on an index of each country's attractiveness and the fixed costs of entering it. We compare our method, which utilizes explanatory variables estimated in the firm-level regressions, to the conventional approach that relies on a reduced-form relationship with proxies for attractiveness and fixed costs.

J.E.L. Classification: F12

Keywords : Heterogeneity, Quality, Trade