

Quality sorting and trade: Firm-level evidence for French wine

Extended Abstract

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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. 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. 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 destination. The firm-level regressions show that there is a payoff to quality in terms of greater presence in export markets. Since direct measures of quality are only available for particular products, we also consider tests of the quality sorting hypothesis using indirect evidence from the average prices and quantities of Champagne exported to different destinations. Under standard theoretical assumptions (namely Pareto distributed heterogeneity), there are discriminating predictions for both average price and quantity. We find that indirect tests corroborate the direct evidence for the hypothesis 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.

1 Data

1.1 Trade data

We use the micro-data collected each year based on export declarations submitted to French Customs. It is an almost comprehensive database which reports annual shipments by destination at the 8-digit product level for each French exporting firm. More precisely, we use the cn8 # 22041011 corresponding to Champagne, the sparkling wines from the official Champagne region.

For each firm, Customs records FOB values and quantities exported to 216 countries. Our extraction from this data spans the six years from 1998 to 2003.

The export declaration data provides us with firm identification numbers, or SIREN, for all 12,314 firms who exported any form of wine (hs4 = 2204) between 1998 and 2003. Of those, the French national statistical agency (INSEE) provides the names, addresses, and primary activity code for the 10,341 firms in existence as of June 2007. We used the firm-level name and address information to match exporters with wine producers that were rated in two guidebooks.

1.2 Quality ratings

Wine producer quality ratings come from two different sources: i) a French one: Burtschy, Bernard and Antoine Gerbelle, 2006, *Classement des meilleurs vins de France*, Revue Des Vins De France (Paris), which we refer to as RVF, ii) an internationally recognized one: Parker, Robert, *Wine Buyer's Guide*, 5th Edition, 1999, which we refer to as WBG. For each of the listed producers, the name and location were matched with the exporter's dataset by hand.