Title

International Trade, Quality Sorting and Trade Costs: The Case of Cognac

I want to submit an abstract for:

Conference Presentation

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Keywords

Cognac exports, quality sorting, VS, VSOP, XO, Alchian-Allen eʃect, trade costs

Research Question

Estimate the determinants of the quality structure of Cognac trade flows. Emphasize the impact of trade costs, transportation (proxied by distance) and custom protection, on Cognac exports by quality.

Methods

We assess the impact of several determinants on the quality structure of Cognac exports in volume terms through an econometric model. Our evaluation is based on a gravity-like framework.

Results

One of our main results is that greater distance leads to an increase of high quality Cognac and a decrease of low quality Cognac exports in volume terms.

Abstract

L'eau-de-vie de Cognac or simply Cognac is a luxury product of Appellation d'Origine Controlée produced in a delimited region in France and marketed in more than a hundred countries worldwide. With over 95 percent of it being exported, Cognac is a high contributor of the booming sector of wine and spirits, the second most important French exporting sector after aeronautics. In 2013, 441 thousand hectoliters of pure alcohol of Cognac were shipped worldwide, generating a turnover of over 2 billion euros. In the past forty-seven years, the volume of Cognac foreign shipments has more than doubled, while their value in real terms has quadrupled.

The objective of this paper is to estimate the determinants of the quality structure of Cognac trade flows. We
focus in particular on the impact of trade costs, transportation (proxied by distance) and custom protection, on Cognac exports by quality.

First, we present some stylized statistics on the evolution of Cognac exports. Raw data of Cognac shipments by year, destination and quality designations were provided by the Bureau National Interprofessionnel du Cognac (BNIC). Information on the volume and value of shipments to over a hundred countries goes from September 1st, 1967 to December 31st, 2013. Our database is unique given the time dimension of our panel, encompassing nearly half a century and most importantly because of our definition of quality. In existing empirical studies, the definition of the quality mix for a product category is based on the difference observed in the unit values for that given category (see for example Hummels and Skiba, 2004) or on ratings from experts or guidebooks (see for example Crozet, Head and Mayer, 2011, for champagne). We, on the other hand, conduct our analysis on an objective and constant definition of Cognac quality, based on the minimum time in oak of the youngest eau-d-vie used in creating the blend. The ageing process and indications are subject to regulations and are closely supervised by BNIC. Cognac quality designations are the following: VS, Very Special, for Cognac aged 2 years minimum, VSOP, Very Special Old Pale, for Cognac aged 4 years minimum and XO, Extra Old, for Cognac aged at least 6 years. In 2015, Cognac VS prices range from 25 to 45 euros per bottle, 32 to 57 euros per bottle for Cognac VSOP and finally 45 to 94 euros per bottle for Cognac XO.

Second, we describe the building of a database on custom protection affecting exports of brandies, Cognac included (HS6: 220820: spirits obtained by distilling grape wine or grape marc). The types of custom instruments that restrict worldwide Cognac exports are: ad-valorem duties (defined in percentage), specific duties (defined in monetary units by units of volume) and prohibitions. Information on ad-valorem and specific duties on an annual basis comes from the International Trade Center, while information on prohibitions comes from BNIC. Our database covers 18 years (1996-2013) and 193 importing countries and reveals the proliferation of prohibitions and of high specific tariffs, resulting in a highly taxed product throughout the world.

Third, we assess the impact of several determinants on the quality structure of Cognac exports in volume terms through an econometric model. Our evaluation is based on a gravity-like framework. In this model, Cognac exports by quality depend on demand (GDP of importing country), supply (GDP of exporting country) and trade costs (tariffs and transportation costs proxied by distance) and other geographical and historical factors. However, our equation presents specific features. As we perform estimations only on French exports, we do not need exporter's GDP: supply is controlled using time fixed effects. For the same reason, we do not construct a relative distance indicator and protection rate, as recommended by Anderson and van Wincoop (2003). Moreover, we add importer's GDP per capita, consumption of alcohol per capita and religious factors to take into consideration the characteristics of Cognac demand. We also control for prohibitions, custom protection, landlockedness, nominal bilateral exchange rates and inequalities (using either the GINI index or the fifth income quintile). Each control variable is intersected with the three quality designations. Our baseline estimation covers the 1996-2013 period, as data on prohibitions and custom protection was available from 1996.

Finally, we perform two tests in order to check the robustness of our baseline results by using different measures of custom protection and by extending our panel to cover the 1967-2013 period.

The contribution of our paper is twofold. We are the first to perform an empirical study covering almost five decades on Cognac trade flows by quality designations to more than a hundred destinations. Reports on the evolution of Cognac foreign shipments are published annually, but the existing literature lacks studies of similar scope.

Our work contributes also to the literature on trade costs and their impact on product quality. Despite distinguished theoretical studies, empirical work on the subject remains relatively scarce. Most importantly, in our paper we are able to test empirically the validity of the Alchian-Allen effect, according to which "a per unit tax or shipping fee applied to similar goods will increase the relative consumption of the higher quality good" (Bauman, 2004). This is why there is a larger proportion of high quality oranges (compared to low quality ones)
found in orange importing areas such as New York than in orange growing areas such as California (Alchian and Allen, 1964). In our case, this translates to a positive impact of distance on the exports of the higher quality Cognac. Similarly, we are also able to test the effect of ad-valorem trade costs on Cognac exports by quality.