Collapse of the Douro Region's Wine Industry in 1756 ?

Wim KOEVOETS

Written on personal title - PT
koevo_w@yahoo.com

Abstract (work in progress):

In the North of Portugal, the hills surrounding the Douro river which flows into the Atlantic Ocean just after passing the cities Oporto and Vila Nova de Gaia make up the Douro region. This region hosts the vineyards of the Portuguese Douro and Port wines.

These wines, as any wine, are complex goods and without experience most consumers only know its quality after buying and drinking them. Wine sellers generally know more than consumers about the quality of their wines. What helps making consumers more informed about the quality of wines they may buy is labels on wine bottles indicating grape types, regional denomination or storing, knowing whether regulators check a wine's quality, wine experts testing, rating and writing about wines. Technically, these practices reduce the information asymmetry between suppliers and consumers of wine.

Such provision of wine information to consumers did not exist around the turn of the 17th century when the Douro region's wine industry took off after a mix of sequential wars, peace Treaties and tax policies. That is, in those days consumers of wines from the Douro region, which were mostly English, only learned about the quality of the wine after drinking it.

Historical evidence shows that during the early 1700s the Douro region's wine industry experienced decades of growth. However, it found itself end 1740s with practices involving the addition of low quality grapes or of wines from other regions to its wines. It also faced a large drop in exports because consumers refrained from buying and complained about the quality of the sold wine. After the summer in 1756 the Portuguese government started regulating wines in the Douro region.

With adverse selection affecting the industry the evidence suggests the Douro region witnessed the transformation of its wine industry into a market for Lemons as introduced by Akerlof (1970). Without reducing the gap between sellers and consumers in information about quality, such a market may end up only providing wines of the lowest quality or even ceasing to exist.

Both historians and authors of the wine trade indicate that the wine industry in the Douro region was about to collapse before its regulation in 1756. This implies that sales beyond that year would disappear absent regulation (or any other change). In this paper we evaluate whether the wine industry in the Douro region was indeed heading towards a collapse in 1756.

For this purpose, we use information on the exports of Douro wine from Portugal to England from 1678 to 1756 and extrapolate their values to the years beyond 1756. If we find them trending towards zero after 1756 then this supports the hypothesis that the wine industry was collapsing.

We use statistical ARIMA models and exponential smoothing techniques for extrapolating the export values beyond 1756. Our current results show that exports of wines from the Douro region to England do not return increasing after 1756, ceteris paribus. The statistical uncertainty of this result suggests we cannot rule out increasing exports. This appears unlikely though given the evidence on adverse selection in the industry and the apparent willingness of English wine consumers to switch away to other Portuguese wines at that time.

Keywords: Lemons market, forecasting, 18^{th} century, wine, exports, Douro region, Portugal, England

JEL Code: D82, C53, L66