Ithaca 2018 Abstract Submission

Title
International Wine Trade: A Prospective Approach based on Porter’s Diamond

I want to submit an abstract for:
Conference Presentation

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<th>Name</th>
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Keywords
wine, international trade, Porter's diamond, prospective

Research Question
what will be the future of international wine trade?

Methods
scenarios approach based on the Porter’s diamond

Results
we establish different international trade patterns for the future

Abstract
(see the pdf file for the complete abstract with figures)

International Wine Trade: A Prospective Approach based on Porter’s Diamond
Olivier Bargain and Jean-Marie Cardebat (Bordeaux University)

The international wine sector has experienced dramatic changes over the past 20 years. Wine became a globalized product, consumed in most countries of the world and produced in an increasingly large number of regions worldwide. For several countries of the old and new (wine) world, like France, Italy, Spain or Chile and Australia, wine is one of the main sources of net trade surplus. This sector nowadays represents a real economic stake at the international level.

It turns out that the global trade of wine has received only a limited attention by the academic profession – with some exceptions including the major work of Kym Anderson and coauthors. In fact, very few studies exist that attempt to explain the nature of the countries comparative advantages and their evolution over time; very few
authors also try to comment on the potential future of the international trade of wine, at least beyond the prediction of macro models based on specific assumptions regarding future growth and consumption patterns. Against this background, this paper aims to discuss past, present and future key comparative advantages of the wine producing nations. We rely on the holistic framework of Porter’s diamond as a convenient setting to think of the evolution in the key determinants of successful trade strategies. Regarding the past evolution, a salient point seems to be the shift from a factor endowment comparative advantage (old world) to a Ricardian technological comparative advantage (new world). Namely, land and traditional knowledge have become less crucial than technology and innovative management. It is likely that latecomers are catching up, building their comparative advantage on significant investments, especially when benefiting from a rising and potentially large domestic demand (China), as described in the Linder theory of international trade (Linder, 1961) where rising demand and income are a major source of comparative advantage.

We also use the diamond to suggest different scenarios for future developments in the international trade of wine. A likely prospect is the shrinking of globalization, to some extent, due to public interventions (tariff and non-tariff barriers to trade). Another scenario or aspect of a likely evolution pertains to the changes guided by environmental issues, including the role of climate change, on production and consumption, the change in preferences (green and local consumptions), etc. We compare these scenarios with those stemming from the traditional macroeconomic approach (Anderson et al.; OECD-FAO).

The outline of the paper is as follows:
1. Explaining the past evolution of wine trade using Porter’s Diamond

International trade theory in the ‘diamond’ model. The Porter’s diamond is a scheme nesting the different international trade theories (Ricardo, HOS, and their developments, New trade theory, Economic Geography, etc.), as represented in figure 1.

Fig. 1: the international trade theory in the perspective of the Porter’s diamond

Past trends in wine trade flows. The diamond scheme allows explaining the past trends in the wine sector of international trade. In particular, it characterizes the emergence of new wine-exporting countries (described on figure 2). In the last 20 years, the key comparative advantages explaining wine exports moved from the down-left to the up-right in Porter’s diamond, i.e. from the key role of factor conditions and support industries to that of demand conditions and firms and market structure. These trends are underlying the catch-up of the new world (described on figure 3, see also Morrison and Rabellotti, 2017). We describe this evolution by the banalization of the basic technologies and the innovation importance in a context of demand shifting from traditional wine-producing countries to the rest of the world.

Fig. 2: The main wine-exporting countries 1995-2015 (in 1000hl).

Fig. 3: The catch-up phenomena – total volume of wine exports by region of origin (1000hl)

Note: old world (France, Italy, Spain), new world (USA, Argentina, New Zealand, South Africa, Chile, Australia)

2. A prospective view on the global wine trade (work in progress)
Next, we provide a prospective analysis of the on-going evolution of the global wine trade by putting in perspective the different ‘diamond components’ for several countries. From this analysis, we can derive general comments regarding the future evolution of the sector.

The demand based scenario: A Linder view of the international wine trade. Domestic supply is stimulated by domestic demand, so that the new wine producers availing of huge domestic markets, like China or the USA, can move from production for the domestic market to the production of wine for foreign markets (Linder, 1961). Just like Japan before and emerging markets more recently, China has followed this process in many sectors (cars, etc.) while the USA had already engaged in it for many years. This scenario could be favored by public interventions such as the protection of home market in these countries (NTBs, tariffs).

This scenario prolongs the catch-up theory (Morrison and Rabelloitti, 2017). It entails the emergence of a tandem China-USA as the wine-export leaders due to the size of their home market, massive investments, aggressive trade policy, and export-based strategy at the national level.

We shall complete the following table (work in progress) to establish the potential of each wine producing country regarding the different diamond components characterizing comparative advantages and trade strategies.

Tab. 1: Trends in the next decade in the Porter’s diamond for the wine sector (work in progress)

Factors conditionsa Related industries Market structure Demand conditions
France - o o o -
Italy - o o o -
Spain - o o o -
USA -o + + +
Argentina o o - o
New Zealand o o + +
South Africa o o o o
Chile o + + o
Australia - + + o
Germany + + + +
China + ++ ++ + +
UK + ++ +
Brazil + o+ o+ +
Georgia + + + o+
India + o+ o+ ++
...

Note: + means positive evolution, - means negative evolution, o means stability.

(a) Factors conditions rely on availability and price of land, climate conditions and vine adaptation, evolution of the cultivated surfaces, evolution of yields, labor force (availability, skills and price), productivity, capacity to innovate, etc.

The environmental scenario. This scenario is not an alternative one: it may well arise in parallel imply dramatic changes regarding factor conditions and future shifts in consumers’ preferences.

In the short/medium term, we can envision a modification in consumers’ preferences toward greener and local wines. As in many food sectors, the demand for organic products is booming, as well as the demand for local small and authentic production. This trend is spectacular in the beer sector with the widespread development of craft beers all over the world. In this scenario, the international trade of wine would decrease or stabilize and would be based on diversity and differentiation. Some exports of wines from the old world might decrease and be replaced by local consumption in importing markets like the US, the UK or Germany.

In a longer-run scenario, factors endowment will be significantly affected by climate change. The world wine-producing countries map is likely to change dramatically over the next decades. A profound transformation of the geography of wine production but also of the wine consumption is already described by interdisciplinary research on climate change and wine. Mediterranean countries could be the main losers, in relative terms, of global warming, as well as Australia and South-Africa.

3. Synthesis and comparison with the literature

Synthesis. From Porter’s diamond we expect the drivers of the future international wine trade to be the demand conditions. The analysis of the past trends seem to suggest this pattern. Having a dynamic and large domestic market would give the incentive to invest in production capacity and in technical and managerial innovations. These investments would create the key comparative advantages for leading the wine international trade. The old world would lose its dominating position due to a degradation of the factors conditions (climate change, density of
population and price of land), a relative lack of investment in innovation (in the context of a falling domestic market), and the difficulties of strategic adaptation when facing the relative closure of foreign markets (the old world used to export in 1995 to other EU countries, without barriers to trade, while its exports are now oriented towards China and the US, which are protected markets). This trend might arise in a context of a relative decline of wine trade flows due to market closure and increasing local preferences.

Comparisons. We will establish a survey of the (few) papers attempting to predict the future evolution of international trade in the wine sector. We will focus especially on the comparison with the predictions based on macroeconomic models (Anderson et al., 2003, 2013, 2017; OECD-FAO model in European Commission, 2017). We see our conclusions as complementary to these models. These models attempt to quantify future trade flows by extrapolating on the basis of macro model estimates and prolonged the trends in series of standard determinants (GDP, GDP/capita, etc.), while major changes / shocks may actually occur and challenge these predictions. We propose an equally controversial prediction based on a more qualitative approach, yet grounded on a scheme encompassing existing trade theories and suggesting a decomposition of the key factors.

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<thead>
<tr>
<th>Country</th>
<th>Factors conditions(^a)</th>
<th>Related industries</th>
<th>Market structure</th>
<th>Demand conditions</th>
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<tbody>
<tr>
<td>France</td>
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<td>Italy</td>
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<td>Spain</td>
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<td>USA</td>
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<td>Argentina</td>
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<td>New Zealand</td>
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<td>o</td>
<td>+</td>
<td>+</td>
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<td>South Africa</td>
<td>o</td>
<td>o</td>
<td>o</td>
<td>o</td>
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<td>Chile</td>
<td>o</td>
<td>+</td>
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<td>o</td>
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<td>Australia</td>
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<td>+</td>
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<td>Germany</td>
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<td>China</td>
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<td>UK</td>
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<td>Brazil</td>
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<td>India</td>
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