

BIO OR NOT BIO? PROSPECT THEORY APPLICATION TO THE ANALYSIS OF THE SITUATION WITH ORGANIC WINEMAKING IN THE BORDEAUX REGION

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Abstract

Over the last few years, the interest towards organic or bio wines has been increasing on the world wine market. As with many organic products, organic wine is becoming more widely available and offering more choice to consumers. Organic wines are produced by specific management practices that take care of the environment and soil. Synthetic chemicals and artificial fertilizer including pesticides are not permitted other than those specifically listed by the specific EU regulation of 2002. The term 'organic wine' is used to describe wines made from organically grown grapes (AB certificate in France), although other ingredients are not certified. Organic wine not only uses organic grapes but is usually processed using the minimum of chemical intervention during the production process. There is, however, no agreed standard for this. It is also not compulsory for wine producers to name chemicals used within the ingredients list, with the exception of sulphite, or whether animal products have been used.

In the last five years the conversion of vineyards to organic or bio vineyards accelerates all over France, the annual rate of conversion varies between 20-25% per year since 2006 (the conversion period takes three years). It becomes even more striking as the total surface of national vineyards in France reduces during the last years. The number of winemakers engaged into the conversion process grows steadily; yet the steady quick growth of SMEs producing natural wines is not always accompanied by a steady growth of quality though a heavy certification process is already put in place.

Nevertheless organic grapes represent still only 3.3% of all French vineyards. The three major regions in France which reveal particular dynamism in this process are Mediterranean regions - Languedoc-Roussillon and Provence-Alpes-Côte d'Azur followed by Bordeaux (more precisely by Aquitaine region which involves Bordeaux area). Being on the third place is pleasing though the reality of the process remains quite discouraging: the number of natural wine producers in Bordeaux is less than 300 (compared to almost 10000 winemakers in total in the region); the surface under organic wine farming is around 2000 ha (compared to the total of 118900 ha) and bio certified wines are only 980 ha. Why the process is so slow?

Our work focuses first on understanding the main reasons and difficulties of the slow rate of the conversion into organic vineyards in Bordeaux. The research methodology employs content analysis and critical incidences approach. A study is grounded on a series of interviews in several wine properties (SMEs) in the Bordeaux region, wine merchants, and

wine broker's agency Our findings show the strong heterogeneity of the Bordeaux natural wines' production sector and considerable differences in solutions found by wine producers dependent on the core competencies. It is demonstrated that Bordeaux winemakers face multiple risks while considering converting into organic wine-making:

- 1) Market risks related to image - the image of Bordeaux wines on the international market is directly associated more with luxury, complex and sumptuous, traditional and chic wines than with simple and natural, organic or bio wines.
- 2) Supply chain risks related to multifaceted supply chain system on Bordeaux wine scene (wine producers, wine merchants, wine brokers, wine syndicates).
- 3) Quality or Environmental risks - Bordeaux oceanic climate is not stable and lacks consistency compared to Mediterranean regions of France, for example. Risks involved into the interdiction of chemical treatment of grape diseases in organic wine farming are quite high.

Secondly we examine these risky choices of winemakers using the prospect theory to explain the various outcomes. We put forward a simple model describing how winemakers make choices in situations where they have to decide between alternatives "bio or not bio" ; "bio certified or not certified", "simply reasonable use of chemicals" that involve several risks and will impact their financial situation. We introduce and compute a value function, based on the potential outcomes and their respective probabilities, and then choose the alternative having a higher utility. The value function of s-shape passes through the reference point and, as its asymmetry implies, given the same variation in absolute value, there is a bigger impact of losses than of gains. Our results point to reference-dependent choice theories such as prospect theory, and suggest that path-dependence is relevant; the concavity of the value function in gains can then lead to a low preference for converting into organic farming even when the choice problems are simple and well-defined, as large real monetary amounts are at stake.

Our study has a double purpose: to identify the barriers and driving forces of the natural wine companies in the Bordeaux region and to model the decision-making process under risks involved in the analysis of the winemaker decision to convert into organic wine farming.

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