

## **Price strategy for wine producers in Québec**

J. François Outreville

Contact: [jf.outreville@laposte.net](mailto:jf.outreville@laposte.net)

### **Abstract:**

The wine consumption in Québec over the last 15 years has grown rapidly and wine production in Québec can be part of this quest for diversified products in terms of quality and price. The Québec wine sector remains an internal phenomenon in Québec and practically does not generate any income outside the province. However, the implications on the development of tourism activities are important and make it possible to partly understand the growth in the number of producers in some regions of Québec province. The growth of supply is related not only to the number of producers but also to the increased varieties of wines proposed. An index of relative firm position in the market based on relative prices has been calculated and we demonstrate that a high price strategy is inversely related to the number of wines produced and the age of the firm.

**Keywords:** Wine production, Price index, Price-quality relation

**JEL classification:** L11, L15, L66, D21

## 1. Introduction

Today there are about 250 wineries in Canada within six provinces: British Columbia, Alberta, Ontario, Quebec, Nova Scotia and Prince Edward Island. Canada's cool climatic conditions enable it to be the largest ice wine producer in the world.<sup>1</sup> Ontario's premier wine regions include Niagara Peninsula, Lake Erie North Shore and Pelee Island. British Columbia hosts the second largest grape growing regions including the Okanagan Valley, Similkameen Valley, Fraser Valley and Vancouver Island.

Québec is in the third place with currently more than fifty wineries, divided into the areas along and south of the St. Lawrence River. It is only in 1985 that the first wine growers obtained the right to sell their production. In 1987, the first few Québec wine growers formed the *Association des Vignerons du Québec*. Early successes at developing quality products prompted many others to follow and the 1990s saw the establishment of several vineyards all over southern Québec.

The growth of supply is related not only to the number of producers but also to the increased varieties and quality of wines proposed. The purpose of the paper is to analyze one aspect of the competitiveness of wine production, i.e., the relationship between firm's price strategies (positioning) and factors explaining this position in the market. An index of relative firm position in the market based on relative prices has been calculated and we demonstrate that a high price strategy is inversely related to the number of wines produced and the age of the firm.

The paper is organized as follows. The next section describes the sector in terms of geographical conditions and types of vines produced. In the following sections we examine the growth of the sector over the past 15 years and propose a measure of price positioning of the wine producers. An analysis of the price-quality relationship is developed and the last section discusses the limits and possible extensions of the analysis.

## 2. General description of the sector

Québec is the least likely of all Canadian wine regions. The south of the province is a fertile region where fruits grow naturally and abundantly. However, the four-month long winter freezes the land deep enough that most varieties of European vines do not survive. In the 1980s, Quebec wine growers started planting varieties known for their resistance to below-zero temperatures. Temperatures in Quebec are still cold in April compared to France for example but nevertheless the number of hours of sunshine is comparable to the situation in Alsace, a well renowned region for white wines.

The centre of the province's winegrowing zone is the old town of Dunham. Average sunshine hours during the growing season in Dunham are 1150 (in Burgundy there are 1315; Niagara has 1426 and the Okanagan Valley 1423), but topographical features create highly localized warm spots that allow the hardiest vines to survive although during the winter months the vines have to be covered to protect them from the fierce cold.

---

<sup>1</sup> Canada produces over 2 million 375ml bottles of ice wine annually. Although Germany and Austria are large ice wine producers, the climate is not as consistently cold as is Canada's to guarantee ice wine production every year.

During the early years, from 1982 to 1992, vineyards mainly emerged in the southern part of Québec province (Montérégie and Southern Townships) but from 1992 onwards, new vineyards started commercial operations in the northern side of the Saint-Laurent River and in Québec city region. Today, vines are cultivated and production is significant in seven regions. They are the Montérégie, Eastern Townships, Center of Québec, Québec, Basses Laurentides, Lanaudière and more recently Bas-Saint-Laurent. There is a total of 53 producers at the beginning of 2009 mainly located in Montérégie and Eastern Townships (Cantons de l'Est where the first vineyards were introduced) and a total area of production equal to 272.0 ha, which means an average size per vineyard of 5.1 ha.

In 1996, Québec's wineries produced mainly dry white wines (52%) and dry wines (85% including reds and rosés). From 1996 to 2008, the number of different wines increased from 73 to 255. Dry wines (red, white or rosé) accounted still for more than 64% of the number of wines produced, followed by fortified wines (red or white) for 14.5% and Ice wines for more than 6%. Other types of wines produced are late harvest, sweet wines, appetizers and sparkling wines. Today, more reds than white wines are produced. In reds, Sainte-Croix, Maréchal Foch, Frontenac, Sabrevois and De Chaunac are popular grapes in all regions, while in whites Vandal-Cliché is mostly grown in northern regions and Vidal, Seyval Blanc and Geisenheim are more popular in the Eastern Townships and Montérégie.

Prices of the different products ranges from \$17/liter for dry wines (on average \$13 per bottle) to more than \$ 44/liter for late harvest and \$132/liter for ice wines (Red Ice wines are rare products only produced in two vineyards) (Table 1).

**Table 1: Prices per liter in 2008**  
**Prices per liter (CAD \$), 2008**

Type of wine	Price/liter
White (dry)	\$17.7
Red (dry)	\$19.3
Rosé (dry)	\$17.2
Quality white	\$32.0
Quality red	\$26.7
Semi-dry wine	\$18.0
Sweet wine	\$20.0
Sparkling wine	\$40.0
Late Harvest	\$44.6
Ice wine (white)	\$131.7
Ice wine (red)	\$205.0
Fortified wine	\$34.4

### 3. Index of firm position

Price policies related to wines are not homogeneous. Some authors (Jones and Storchmann, 2001; Lecocq and Visser, 2006) have argued that the price is a signal of wine quality to the consumer and winery strategies affect price setting in the wine market. To analyze this aspect, an index of relative firm positioning has been built, that could point out in a synthetic way whether the firm is positioned, as price of its production is concerned, around, under or above the sample average (Coppola et al. 2001).

This index has been calculated as the average of ratios between firm price for each wine and the sample average price for the same wine category.<sup>2</sup> According to this index, a firm with an index value greater (lower) than 1.0 is positioning itself above (below) average prices. The first step of the analysis is to map this index with the regional characteristics of wineries. Figures are not presented in this paper for lack of space but the main conclusions are summarized as follows.

The relationship between the index and the region of origin of the firm shows that in each region some firms are positioning themselves above the average which indicates that firm positioning is not related to the location.

The relationship between this index and the number of wine produced shows that firms producing few wines (six or less) have generally average or above the average prices, while a large share of firms applying a more horizontal differentiation are positioned under the average price.

A high price positioning can also be related to either 1) a small firm carrying out a quality strategy based on a niche market, or 2) a large firm selecting high value wine market. On the other hand, a low price positioning can be referred to large firms aiming at an average standard quality and applying a low price strategy or, on the contrary, to more small, marginal and traditional firms.

Finally, a high price positioning can also be related to the age of the vineyards, assuming that new small firms would prefer to enter the market in a niche market of quality wines.

The conclusion of this analysis is that older wineries, most of them the largest and producing the wider range of wines are positioning their wines below the average price to target a large population of consumers. On the contrary, the most recent wineries are targeting more sophisticated consumers by signaling the quality of a selection of wines with higher prices. It is therefore useful in the next section of the paper to examine the empirical relationship between firm's strategies (positioning) and factors explaining this position in the market, in particular the perceived quality of wine produced.

#### **4. The price-quality ratio in the wine market**

What determines wine prices? The question is obviously not new but the most recent papers dealing with this subject tend to go beyond a simple competitive market where the prices are the result of supply and demand (Chiffolleau and Laporte 2004). Many papers look at the determinants of prices by using hedonic price functions. Wine prices are determined by climate influences and by their reputation or perceived quality (Jones and Storchmann 2001). In an application to the wines of Bordeaux and Burgundy, Combris et al. (1997, 2000) come to the conclusion that the market price of wine can be explained by the objective characteristics appearing on the label of the bottle. Most of the recent literature (Landon and Smith 1998; Oczkowski 2001; Schamel and Anderson 2003; Benfratello et al.

---

<sup>2</sup> A weighted index was not calculated due to lack of information on the share of each wine on total firm production.

2004) demonstrates the importance to consider the reputation to explain the formation of a price on the market.<sup>3</sup>

The purpose of the empirical analysis is to examine the relationship between firm's strategies (positioning) and factors explaining this position in the market. In particular we considered some aspects related to the characteristics of the firms and the perceived quality of wine produced. The model is expressed by the following equation:

$PPI_i = f(S_i, Q_i)$  where:

- PPI<sub>i</sub> represents the price-position index of the firm,
- S<sub>i</sub> is the set of attributes defining the firm or the characteristics of supply (age, size, number of wines produced, and region of production),
- Q<sub>i</sub> is the perceived quality factor measured by the number of medals (or rewards) gained by the firm in public contests over 2006-2008. A similar measure was proposed by Lima (2006) in the study of prices of Californian wines.

The model has been tested on a data set of only 26 firms for which the price-position index could be calculated. Using these observations a linear multiple regression analysis has been carried out. Results are presented in Table 2 for the set of S<sub>i</sub> and Q<sub>i</sub> variables. The region of origin has been omitted since results were not significant.

As expected, firms producing a fewer number of products are significantly positioning themselves in the high price segment of the market. The same is true for the age of the firm (or the number of years of production). However, the size is not significantly related to the index because, as explained in the previous section, a high price positioning can also be related to either a small firm carrying out a quality strategy based on a niche market, or a large firm selecting high value wine market.

A more surprising result is the lack of relation with the variable related to the perceived quality of wines produced by the firm. A similar result was found by Lecocq and Visser (2006) when investigating data sets of French wines. They found that prices are not affected by grades assigned by professional wine tasters and suggested that jury grades is an imperfect measure of quality. The same reason could be proposed for the rewards or medals awarded to wines.

**Table 2: Regression results for the Price-position index in 2008**

Dependent Variable: PPI ( index)

Method: Ordinary Least Squares

Included observations: 26

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.201598	0.057710	20.82126	0.0000

<sup>3</sup> For a review of the literature see Lecocq and Visser (2006). They confirm that the prices of the wines of Bordeaux and Burgundy are primarily determined by objective characteristics. Outreville (2008), on the other hand, relates all the characteristics of a wine to price sensitivity to the market.

NBofWines	-0.017300	0.007928	-2.182008	0.0406
NBofYEARS	-0.008418	0.002763	-3.046492	0.0061
SIZE	0.004652	0.004109	1.131943	0.2704
QUALITY	0.001048	0.003090	0.339130	0.7379
<hr/>				
R-squared	0.447773	Mean dependent var	1.006538	
Adjusted R-squared	0.342587	S.D. dependent var	0.102760	
S.E. of regression	0.083319	F-statistic	4.256954	

## 5. Discussion

The Québec wine sector remains an internal phenomenon in Québec and practically does not generate any income outside the province. However, the implications on the development of tourism activities are important and make it possible to partly understand the growth in the number of producers in some regions of Québec province.

Wine regions in Canada have recently defined quality standards and groups, such as the Vintners Quality Alliance (VQA) in British Columbia and Ontario. VQA membership is not prevalent in Quebec yet. The apparent reason is the lack of interest in defining standards that are appropriate for Quebec wines which have a style different enough to warrant its own sets of standards. The choice of grapes has not been imposed and most vineyards have planted vine species that are better adapted to cold climates. Because the grapes are different, the wines naturally are different and quality standards need to be different. However, it is likely that as Quebec wines and markets develop, quality standards will have to be established.

Canada has perhaps the greatest competitive advantage for producing icewine in the world. This wine is marketed as a high-quality product associated to high price. Canada's, and especially Québec's climate is suitable for this production with the combination of weather warm enough to grow grapes, and cold enough to freeze them. Icewine production in Québec has increased from only a few vineyards in the mid-1990s (only 2) to more than 15 vineyards in 2008.

## 6. References

- Benfratello, L., M. Piacenza and S. Sacchetto, 2004, What Drives Market Prices in the Wine Industry? Estimation of a Hedonic Model for Italian Premium Wines, Ceris-CNR, Working Paper no.11.
- Chiffolleau, Y and C. Laporte, 2004, La formation des prix: le marché des vins de Bourgogne, *Revue française de sociologie*, vol. 45(4): 653-680.
- A. Coppola, V. Sodano and F. Verneau (2001) Explaining price dispersion in the Campania market for wine, Vineyard Data Quantification Society, Working-paper at [www.vdqs.net](http://www.vdqs.net)
- Combris, P., Lecocq, S. and M. Visser, 1997, Estimation of an hedonic price equation for Bordeaux wine: does quality matter? *The Economic Journal*, vol. 107, pp. 390-402.
- Combris, P., Lecocq, S. and M. Visser, 2000, Estimation of an hedonic price equation for Burgundy wine, *Applied Economics*, vol. 32, pp. 961-967.
- Jones, G.V. and K.H. Storchmann, 2001, Wine market prices and investment under uncertainty: an econometric model for Bordeaux Crus Classés, *Agricultural Economics*, vol. 26: 115-133.

- Landon, S. and C. Smith, 1998, Quality expectations, reputation and price, *Southern Economic Journal*, vol. 64(3): 628-647.
- Lecocq, S. and M. Visser, 2006, What Determines Wine Prices: objectives vs sensory characteristics, *Journal of Wine Economics*, vol. 1(1): 42-56.
- Lima, T., 2006, Price and quality in the California wine industry: an empirical investigation, *Journal of Wine Economics*, vol. 1(2): 176-190.
- Oczkowski, E., 2001, Hedonic wine price functions and measurement error, *The Economic Record*, vol. 77(239): 374-382.
- Outreville, J. F., 2008, A market-based pricing model for wines: test over the period 1988-2007, *Enometrica*, vol. 1(1): 35-43.
- Schamel, G. and K. Anderson, 2003, Wine Quality and Varietal, Regional and Winery Reputation: Hedonic Prices for Australia and New Zealand, *The Economic Record*, vol. 79 (September): 357-369.