

The impact of tourism on the willingness to pay for a bottle of standard quality champagne

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Abstract

Wine tourism is currently a key issue for the European wine industry. As wine production around the world continues to exceed consumption, techniques which develop brand loyalty and stimulate sales need to be developed. Whilst substantial research has been carried out into wine tourism in the new world much less has been done in Europe. Currently, there is a growing interest in wine tourism in Europe and notably in France. It is a part of current debates about the future of wine businesses and is often considered a good way to attract new buyers. However, this new interest in wine tourism is less marked in the most reputable vineyards like champagne. On the one hand, some think that tourism cannot enhance the high image these wines have. On the other hand, the providers of champagne think of wine tourism only as a means of increasing sales and consider it irrelevant for them, due to their great success since 2001. But these positions ignore the potential wine tourism offers to increase image of wine quality, a potential which was demonstrated in the new world several years ago. This paper focuses on the potential impact of tourism on the value of champagne. We assume that tourism-related activities can increase consumers' quality perceptions and offer a possible increase of price for a bottle of standard quality. From a linear model with OLS indicators, we seek to explain the estimated price of a bottle of "standard quality" champagne from these variables completed by socio-economic indicators. We use an explanatory quantitative study with a sample of 143 buyers of champagne in direct sales. Our results prevent to maintain the initial model but allow us to highlight the use of wine tourism to enhance the value of standard champagne rather than merely the quantity of sales.

JEL classification: C12, M31, Q11.

Keywords: Wine tourism, willingness to pay, value of champagne.

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1 Introduction

Wine tourism is currently a key issue for the European wine industry. It is becoming a main interest for the agricultural ministry in France, as the Dubrule's report demonstrates. Whilst the first form of this tourism appeared in antiquity (Cambourne and *al.*, 2000, 2) and was developed in some European vineyards at the beginning of the twentieth century (Johnson, 1986, 158), more interest has been shown in wine tourism in the new world than in Europe (Carlsen and Charters, 2006, 264) and it has been developed most effectively there (Ali-Knight and Charters, 2002, 311). For example, in the United States almost all the vineyards have improved their performance by the link with tourism (Graham, Mathias and Williams, 2006, 30) and some, like the *Napa Valley*, have had great success with it (Conaway, 1990; Skinner, 2000, 293).

But new dimensions appear with the needs of French wine-growers. As one AFIT Study (Dubrule, 2007) showed in 2001, wine tourism offers opportunities for reviving profit within the context of the current structural crisis. Since the 1990's, some French wine-growers have used it as a solution to maintain or increase the sales (Thévenin, 1996; Mallon, 1996; Choisy, 1996).

But wine tourism has not been so actively developed in the more well-known vineyards. These regions do not need to increase sales and conversely often try to limit any increase due to the tension on the grape market. This specific situation prevents all the profit for one region which needs to increase their tertiary activity. This is the case for the Champagne region of France. A perception which focuses only on sales misses one side of the purpose of wine tourism. According to Getz (1999, 14), this activity offers strategies to improve the long-term market for the wine and its image. In this way, it should be possible to look beyond the French experience to justify the development of wine tourism within Champagne. So, the issue is to discover if there is a relation between the wine tourism and the creation of value for champagne.

2 Context

The reputation of champagne is the result of the region's determination to continually improve its image. This wine is currently very successful, while other French vineyards are in trouble. In spite of several short term tensions, especially in the grape market, due to this success, wine tourism is one of the new challenges for Champagne. Currently, it is more sought after by the regional authorities than by the producers themselves. These latter consider it like a source of useless expenditure and time costs in the light of their current success (Charters, Menival,

2008, forthcoming).

1. The interest of wine tourism for the Champagne region

In 2005, this region has an acceptable economic situation compared with others (INSEE, 2007) but its structure relies on an unbalance between secondary and tertiary activities (Bosselle 2001; INSEE, 2004a; Banque de France, 2006). Its tourist profits are weak in comparison with the other regions in France and its potential (SESGAR, 2004; INSEE, 2004b). That is why the current goal is to improve tourism activities. In this way, the wine industry offers a great potential. From the 53 sites with most than 10 000 visitors, 10 are linked to the industry (CRT Champagne-Ardenne, 2006, 2). More specifically, the region wants to improve the role of the wine route and its links with the other tourist activities (CRT Champagne-Ardenne, 2006, 61). But success is predicated on the participation of the actors in the champagne industry which is currently weak.

- b) The weak participation of the actors of champagne

Tourist activity already exists in the champagne business and gives strength to some brands.

“ This is an international strategy which the Champenois have been pursuing successfully for two centuries now and, whilst they do not neglect the quality of the champagne, their tourism and promotional strategy is focused on providing a great experience, and winning and keeping friends” (Carlsen and Charters, 2006, 268).

But the wine route stays underused in comparison to the expectations of the region. Only the “Aube” sub-region seems to maintain a good level of involvement with the route (CRT Champagne-Ardenne, 2006, 22). Many of the actors in the other sub-regions assume that wine tourism is pointless in the light of the current success situation. Wine tourism could become important only if champagne encounters a crisis like that of 1990 (Charters and Menival, 2008, forthcoming). This perspective results from an incomplete idea of wine tourism which is considered only as a means of improving for the direct sales. However, it appears that there may be a potential impact on the value of champagne which could allow the growers to increase their standard price thanks to a better image.

3 Method

The mechanisms which define the value of one specific wine is hard to understand. Our first assumption is to use the price (estimated by the buyers) for a bottle of standard quality champagne. This choice comes from the idea that measuring the value of wine through the price shows the willingness to pay (Combris, Lange & Issanchou, 2006).

We do not want to measure this behaviour from blind testing but from the perception of the wine tourism-related activities. Then we define wine tourism-related activities through the intrinsic and the extrinsic activities. These choices are based on the research into wine tourism. For Roberts and Sparks (2006, 54), the visitor is rarely interested simply in wine tasting, rather the total experience is most importance. For this reason it is necessary to consider accommodation, restaurants, hospitality and a set of other activities as part of the overall offer (Hall, Johnson & Mitchell, 2000; Skinner, 2000; Hall & Mitchell, 2004; Gammack, 2006). So, in our study, we measure the perception of accommodation, restaurants and other tourist attractions, including visits to champagne cellars and the use of the champagne route.

In addition, we have to integrate the reputation of champagne. According to Shapiro, reputation has an impact on the price that the sellers can earn (1983, 669). This results from the role of the reputation as quality signal (Shapiro, 1982). Several studies focus on this correlation for the price of wines (Landon and Smith, 1998; Haeger and Storchmann, 2006) and some specifically consider champagne (Gergaud, 1998; 2000). That is why we attempt to measure the perceived reputation of champagne for buyers.

To complete this external information beside wine tourism, we assume that some characteristics can modify the evaluated price of a bottle due to the increase of knowledge resulting from an increased experience of champagne tasting. On the one hand, we take the annual quantity of bought bottles without distinguishing the nature of the providers (big brands or winegrowers). On the other hand, we integrate the fidelity of buyers. This is measured by the years of purchasing from the same provider.

Lastly, we have to consider demographic variables, to prevent all false correlations. Indeed, we know that some socio-economic characteristics can have an impact on the willingness to pay for wine (Lecocq *et al.*). In this work, we focus on the gender, age, household annual average income and the nationality of respondents.

From all these variables, we analyse the following Multiple linear regression:

$$PSQ = Cst + \alpha_1 ACA + \alpha_2 RCA + \alpha_3 OCA + \alpha_4 CR + \alpha_5 CC + \alpha_6 R + \alpha_7 B + \alpha_8 F + \alpha_9 G + \alpha_{10} A + \alpha_{11} AI + \alpha_{12} N + \varepsilon$$

PSQ: price of standard quality

ACA: accommodation in Champagne-Ardenne

RCA: restaurants in Champagne-Ardenne

OCA: other tourist attractions in Champagne-Ardenne
 CR: use of champagne route
 CC: visits to champagne cellars
 R: reputation of champagne
 B: the number of bottles bought per year
 F: fidelity to the providers
 G: gender of respondent
 A: age of respondent
 AI: household annual average income
 N: nationality of respondent

4 The dataset

We start with an explanatory sample of 143 buyers of champagne who completed and returned a questionnaire about their perception of champagne and its region. To avoid any bias, the sample of buyers comes from different sub-areas of production: the *Côte des Blancs*, *Montagne de Reims*, *Côte des Bar*, and the *Vallée de la Marne*.

Half of the buyers were surveyed from visiting the premises of a major brand whilst the other half came from 12 small winegrowers. Each questionnaire was given after the purchase of at least one bottle of champagne during the summer vacation.

Among the collected data, we use thirteen variables² which are described in tables 1 and 2.

Table 1: Descriptive statistics of quantitative variables

	PSQ	ACA	RCA	OCA	CC	R	A	F	B	AI
N Valid	118	122	97	101	118	137	137	92	138	72
Missing	25	21	46	42	25	6	6	51	5	71
Mean	17,54	7,62	7,45	7,00	8,32	8,72	47,01	4,83	20,96	4140,61
Std. Deviation	1,33	1,369	,890	1,470	1,116	4,54	13,791	3,12	3,47	2,025
Skewness	,489	-,135	-,129	-,116	-,067	-,299	,280	,117	-,452	-,507
Std. Error of Skewness	,223	,219	,245	,240	,223	,207	,207	,251	,206	,283
Kurtosis	-,885	-,288	-,737	,567	-,529	-,967	-,346	-1,157	-,239	-,159
Std. Error of Kurtosis	,442	,435	,485	,476	,442	,411	,411	,498	,410	,559

²The outliers were evacuated for each variable from the Tukey's method.

PSQ: the estimated price for a bottle of champagne with a standard quality. It is normalized with the logarithm function.

ACA: the notation of the quality of accommodation in Champagne-Ardenne on a range 1-10 with 10 for the best.

RCA: the notation of the quality of restaurants in Champagne-Ardenne on a range 1-10 with 10 for the best.

OCA: the notation of the quality of other tourist attraction in Champagne-Ardenne on a range 1-10 with 10 for the best.

CR: the use of champagne route. It is transformed in dummy with “Yes” as referee.

CC: the notation of the quality of the visits to champagne cellars on a range 1-10 with 10 for the best.

R: the evaluation of the reputation of champagne on a range 1-10 with 10 for the best. It is normalized with a square function.

B: the number of bottles bought per year. It is normalized with the logarithm function.

F: the number of years of purchasing from the same provider. It is normalized with the logarithm function.

G: gender of respondent. It is transformed in dummy with “Male” as referee.

A: age of respondent.

AI: average income of the Household of the respondent. It is normalized with the logarithm function.

N: nationality of the respondent. It is transformed in dummy with “French” as referee.

Table 2: Descriptive statistics of dummies

	Frequency	Percent	Valid Percent
G			
Male	75	52,4	54,0
Female	64	44,8	46,0
Total	139	97,2	100,0
N			
French	41	28,7	28,7
Others	102	71,3	71,3
Total	143	100,0	100,0
CR			
Yes	87	60,8	63,0
No	51	35,7	37,0
Total	138	96,5	100,0

5 Result

We analyse these variables from a Multiple Linear Regression with OLS estimators. According to type I error of 5 %, we can observe that the initial model cannot allow inferences (table 3) and must be reduced by an iterative process until the *Student* test is guaranteed for all the explanatory variables (table 4).

Table 3: Coefficients^(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.963	,996		-.967	,359
	RCA	,159	,081	,480	1,966	,081
	CC	-,045	,053	-,132	-,853	,416
	A	,001	,004	,079	,249	,809
	F	,090	,041	,439	2,192	,056
	N	,400	,129	,747	3,108	,013
	AI	,340	,061	,908	5,569	,000
	G	,195	,083	,377	2,345	,044
	R	-,004	,002	-,296	-1,945	,084
	ACA	-,006	,061	-,021	-,102	,921
	OCA	,022	,042	,097	,527	,611
	CR	,065	,139	,086	,466	,652
	B	-,011	,061	-,037	-,177	,863

^(a) Dependent Variable: PSQ

So, we obtain the final model with less but useful variables. Indeed this model respects the main fundamental conditions of the OLS regression. At first, the residual follows a Normal distribution as shown by the *Kolmogorov-Smirnov* test (table 5). Secondly, there is no problem with multicollinearity, as confirmed by the Tolerance (table 6). Lastly, there is a homoscedasticity according to the test of *Breusch-Pagan*³ (1979) with the following *p value* = 0.00759529.

This final model shows a good fit with an adjusted R² of 55.7% (table 7).

Thus we can analyse this equation to understand how tourism has an impact on the willingness to pay for a bottle of standard quality champagne (table 8). From the table 4, we obtain the following linear model:

$$PNQ = -0.498 + 0.102RCA + 0.101F + 0.239N + 0.275AI + 0.175G$$

Thanks to this, we know that the grades of restaurants in the Champagne-Ardenne region, foreign nationality (compared from “French”), the length of time of fidelity

³ $\chi^2 = 15,75$ and $df=5$.

Table 4: Coefficients^(a)

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-,498	,660		-,755	,458
	RCA	,102	,045	,319	2,271	,032
	F	,101	,031	,475	3,295	,003
	N	,239	,074	,433	3,214	,004
	AI	,275	,052	,700	5,313	,000
	G	,175	,072	,316	2,439	,022

^(a) Dependent Variable: PSQ

Table 5: One-Sample Kolmogorov-Smirnov Test

		Unstandardized Residual
N		30
Normal Parameters ^(a,b)	Mean	,0000000
	Std. Deviation	,16693159
Most Extreme Differences	Absolute	,105
	Positive	,105
	Negative	-,087
Kolmogorov-Smirnov Z		,576
Asymp. Sig. (2-tailed)		,894

^(a) Test distribution is Normal.

^(b) Calculated from data.

to a particular champagne producer, the average income of the household and the gender “female” (compared from male) have a positive impact on the willingness to pay. According to the *Beta* coefficients, the tourism-related variables (restaurant and nationality) do not have the biggest impact on this willingness to pay. The first one is the average income, followed by the fidelity to the provider. After that the positive impact of tourism appears. On one hand, the willingness to pay of a foreigner is higher than that of the French which is interesting because of the evident link between tourism and nationality of buyers. On the other hand, the higher the grades of restaurants are, the higher the willingness to pay is.

6 Conclusion

This study adds to previous empirical studies, realized in the new world, about the role of tourism in the increased image of a vineyard or region. We wondered if

Table 6: Coefficients^(a)

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)	-,755	,458
	RCA	2,271	,032
	F	3,295	,003
	N	3,214	,004
	AI	5,313	,000
	G	2,439	,022

^(a) Dependent Variable: PSQ

Table 7: Model Summary^(b)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	,796 ^(a)	,633	,557	,18350

^(a) Predictors: (Constant), G, N, AI, RCA, F

^(b) Dependent Variable: PNQ

this activity could have an impact on the willingness of visitors to pay for a bottle of standard quality champagne. The first answer would be negative according to the usual French position which perceives that there is a gap between the high image of a vineyard and the image offered by tourists. But, even though some tourism activities have no influence on the purchase of champagne, others have an interesting impact and could change these traditional expectations.

The final model shows a good fit and shows that a foreign nationality and the grades of restaurants could have a positive impact on the willingness of a visitor to pay for a bottle of standard quality champagne. Of course, these variables are not alone and not the most important in this model. However these results could be used as a first step to highlight the use of wine tourism to enhance the value of standard champagne rather than merely the quantity of sales.

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