

”First in a Little Iberian Village”  
versus ”Second in Rome” :  
A Wine-Based Test for  
Collective Reputation Effects

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## Abstract

How do individuals or things through their own reputation (e.g. researchers, football players, scientific articles, wine producers...) give birth to a group's reputation and conversely how do they take advantage of this group's reputation (resp. a laboratory, a football team, an academic journal, a vineyard...) ? To be a leader in a rather unknown organization or to be a follower in a well-known organization : what is better ? A long time ago, Julius Caesar declared that he "would rather be first in a little Iberian village than second in Rome".

This article aims at testing the accuracy of this famous quotation and more generally intends to analyse the complex relationship existing between the two dimensions of reputation : individual and collective. The theoretical model –a static simultaneous equation system– is econometrically estimated from a dataset concerning no less than 124,000 wine quality opinions by about 6,000 different European consumers. These opinions concern the main wines currently supplied in 7 different countries (Belgium, Denmark, Germany, France, The Netherlands, Switzerland, United-Kingdom). The results are in line with Julius Caesar's intuition.

**Key Words :** Collective and individual reputations, Wine.

**JEL Classification :**

# 1 Introduction

A very traditional belief is that our own reputation is, all other things equal, function of the level of reputation of the groups, institutions or organizations we belong to. Classical illustrations of this commonly called "collective reputation effect" (see Tirole, 1996) are the ones of a researcher with his/her laboratory, of a teacher with his/her university or his/her school, of an article with its academic journal, of a book with its editor, of an actor/tress with his/her movies, of a sportsman/woman with his/her team, of a wine producer with his/her vineyard or more generally the one of a product with its brand (umbrella branding effect)...

A long time ago, while crossing the Alps, Julius Caesar declared that he would rather be first in the little Iberian village than second in Rome. Said differently, this could mean that: (i) to be a leader in a second rank or little-known organization is potentially "better"<sup>1</sup> than to be a follower in a top or well-known structure ; (ii) in top institutions, only the leaders derive benefit from the group's reputation, followers do not. When applying for a job and especially when facing a trade-off<sup>2</sup>, choosing between non-equivalent

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<sup>1</sup>It will become clear, at least we hope, what "better" means.

<sup>2</sup>Obviously, there is no trade-off for the best applicants who, under normal conditions, choose the best positions.

alternatives may become a dilemma: to be a key member of a second division football team *versus* to be a substitute of a first division football team for example, to accept/to deny a second part in a promising movie *versus* a first part in a tight budget movie, etc.

To our knowledge, there is little empirical proof concerning the complex relationship existing between the two dimensions of reputation -individual and collective- whereas a theoretical literature is developing on this topic (see Andersson, 2002 for a survey). Empirical evidence we have mainly concern the image spillovers between products sold under the same name but often treat -by lack of appropriated data essentially- brand reputation as an exogenous variable.

What is the recipe for getting a good collective or individual reputation level ? How to assess the umbrella-branding phenomenon: the effect of a collective reputation on individual reputation levels and *vice versa* the effect of individual reputations on the collective reputation level ? Is the reputation of a given laboratory simply the arithmetic result -an average- of its fellows' own reputation levels ? Does every fellow benefit from the reputation of his laboratory with the same intensity ?

These questions are relevant given the major role played by reputation

in every day life as recognized earlier by F. von Hayek (1948)<sup>3</sup>. Reputation plays, among others, a key role in matter of price formation as established recently by a significant set of empirical studies on wine (see among others Landon and Smith, 1998)<sup>4</sup>.

This paper suggests an empirical strategy to assess the collective reputation or umbrella-branding effects. The theoretical model developed here is applied to the case of wine from a rich dataset covering seven European countries (Belgium, Denmark, Germany, France, The Netherlands, Switzerland, United-Kingdom), six thousands heterogenous consumers and from seventeen to twenty-two sorts of wine according to the country. As a whole, these data form a series of 124,000 different wine quality opinions. With this dataset, we know what a wide range of consumers think about the main wines supplied in the world; whether they drink them usually or not, and so on... The results show that Julius Caesar's intuition at least works for Bordeaux wines

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<sup>3</sup>"*In actual life the fact that our inadequate knowledge of the available commodities or services is made up for by our experience with the persons or firms supplying them-that competition is in a large measure competition for reputation or good will-is one of the most important facts which enables us to solve our daily problems. The function of competition is here precisely to teach us who will serve us well : which grocer or travel agency, which department store or hotel, which doctor or solicitor, we can expect to provide the most satisfactory solution for whatever particular personal problem we may have to face.*", F. von Hayek (1948, p.97)

<sup>4</sup>All those applications agree on the existence of a positive and significant level of correlation between the producer's reputation on the one hand and the bottle price on the other hand.

and supposedly for a broader class of products or individuals, the quality of which is mainly subjective and therefore difficult to assess.

The paper is organized as follows. Section 2 summarizes the related literature, Section 3 develops the model, Section 4 presents the data, Section 5 contains the estimation results and Section 6 concludes.

## **2 Related Literature**

This article has obvious connections with Jean Tirole's (1996) collective reputation theory. According to this author, individual reputations are determined by the reputation of the group the individuals belong to and conversely, the group's collective reputation level is an aggregate of the whole individual reputations. Tirole shows that the stronger the member's incentive to maintain his individual reputation, the greater the group's reputation level. Current incentives are affected by the members' and the group's past behavior, in such a way that current members can be discouraged and discredited by the mistakes committed by their elders a long time ago.

Actually, collective reputation theory is close to the more specific umbrella branding theory. Here, the collective reputation effect is analysed from the

multi-product firm point of view. When consumers are uncertain about the product's quality, a collective brand may act as a quality signal through image spillovers. For Sullivan (1990), such spillovers occur when information about a particular product affects the demand for the other products sharing the same brand name. According to Choi et al. (1995), reputation linkages can be created by multi-product firms through image spillovers among various products. For those authors, the possibility for consumers of identifying a range of products with the group can provide the firm substantial economies of scope in costs.

For the firm, the umbrella branding practice allows economies of scope, in particular because it economizes on the cost of creating a new brand (Tauber, 1988). Moreover, Andersson (2002) shows that if a firm is credible in the production of high quality products, i.e. if it has produced a high quality in every period, the profits made when it carries a pooled reputation for producing two goods of high quality are not smaller than the sum of the profits of two firms producing one high quality good each and carrying the respective individual reputations.

Umbrella branding literature is often concerned with a specific issue: brand extension, i.e. the use of an established brand name to launch a prod-

uct in a new market in order to reduce the introductory costs (Keller and Aaker, 1992). For Wernerfelt (1988, p.459), by branding a new product, the firm does two things : it claims that the old product and the new one are both of good quality, and it invites the consumers to pool their experience with the two products to infer both qualities. Wernerfelt's (1988) model shows that, in equilibrium, only firms producing a good quality actually choose to use the umbrella branding strategy. In this framework, umbrella is a bond for quality.and brand extension is efficient only when all the products under the umbrella contribute to the brand's reputation, i.e. when all the products are of good quality.

Empirically, the notion of collective reputation has received little attention. Jarrel and Peltzman (1985) study the effect of drug and auto recalls on demand. They show that any favorable effect on the demand for substitutes is swamped by a more general negative effect on the industry. Borenstein and Zimmerman (1988) are interested in estimating the loss of demand that airlines incur due to crashes. They suspect a weak collective reputation effect since after a specific crash financial losses spill over to competing airlines. Sullivan (1990) is interested in long-term effects of umbrella branding, and provide empirical evidence for the existence of positive and negative image

spillovers between products sold under the same brand name in the case of automobiles. Other empirical evidences may also be found in trade literature (see Erdem, 1998, among others).

### **3 The Theoretical Model**

The theoretical model developed in this section is a simultaneous equation system in which: (i) collective reputation is, among others, a function of the different individual reputations and (ii) the different individual reputations depend upon the group's collective reputation level.

Both notions of expected quality and reputation are defined briefly in a first subsection. The simultaneous system is set out in the second subsection. This model, designed for a set of related products remains valid for a set of individuals.

#### **3.1 Expected quality and reputation**

In this paper, the notion of expected quality is used at an individual level, the one of reputation at an aggregate level. In a population made of  $I$  individuals ( $i = 1, \dots, I$ ), what is commonly called expected quality for a product  $j$  ( $q_j^e$ )

is a set of  $I$  idiosyncratic quality opinions/beliefs :

$$q_j^e \equiv (q_{1j}^e, \dots, q_{ij}^e, \dots, q_{Ij}^e)' \quad (1)$$

The product's level of reputation ( $R_j$ ) is a simple computation, an arithmetic average, of these opinions/beliefs<sup>5</sup> :

$$R_j = \frac{1}{I} \sum_{i=1}^I q_{ij}^e \quad (2)$$

Therefore, from a set of  $J$  products (i.e. when  $j = 1, \dots, J$ ) and  $I$  individuals, we obtain a set of  $I \times J$  different opinions, leading to a vector of  $J$  expected quality variables ( $q_1^e, \dots, q_j^e, \dots, q_J^e$ ) and a set of  $J$  reputation levels.

When there exists a link, a common trait between the  $J$  products; when they are sold under the same brand name or umbrella  $U$  for example, each of the  $I$  individuals has an opinion/belief about the entire group's level of quality :

$$q_U^e \equiv (q_{1U}^e, \dots, q_{iU}^e, \dots, q_{IU}^e)' \quad (3)$$

The group's level of reputation ( $R_U$ ) is a simple computation, an arithmetic average, of the preceding opinions/beliefs :

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<sup>5</sup> $R_j$  correspond to what polls and surveys report.

$$R_U = \frac{1}{I} \sum_{i=1}^I q_{iU}^e \quad (4)$$

Obviously, we could easily imagine more sophisticated models including several umbrellas ( $U_1, U_2$  and so on...), with individuals member of only one group ( $U_1 \cap U_2 \cap \dots = \emptyset$ ) or more than one group ( $U_1 \cap U_2 \cap \dots \neq \emptyset$ ).

### 3.2 The static simultaneous system

If, as shown previously,  $R_U$  and  $R_j$  are easily computed from the various elements of  $q_U^e$  and  $q_j^e$  respectively, there is no reason for  $q_{iU}^e$  to be the arithmetic result of  $q_{i1}^e, \dots, q_{ij}^e, \dots, q_{iJ}^e$  :

$$\text{Prob} \left( q_{iU}^e \neq \frac{1}{J} \sum_{j=1}^J q_{ij}^e \right) > 0 \quad \forall i = 1 \dots I \quad (5)$$

In economic terms, all this means that our opinion about the group's level of quality is not necessarily an arithmetic average, but more likely a weighted average of our opinions concerning the quality of its members :

$$q_{iU}^e = \alpha_0 + \alpha_1 q_{i1}^e + \dots + \alpha_j q_{ij}^e + \dots + \alpha_J q_{iJ}^e + \varepsilon_0 \quad \forall i = 1 \dots I \quad (6)$$

$q_{iU}^e$  is also probably, among others, affected by a vector of exogenous variables ( $X_U$ ) relative to the umbrella itself like its own level of goodwill for example. The first equation of interest has therefore the following econometric structure :



parameters to be estimated and the  $\{\varepsilon_0, \dots, \varepsilon_j, \dots, \varepsilon_J\}$  is a vector of well-behaved error terms. When  $J = 2$ , i.e. for two products and 1 umbrella, the system has the following pattern :

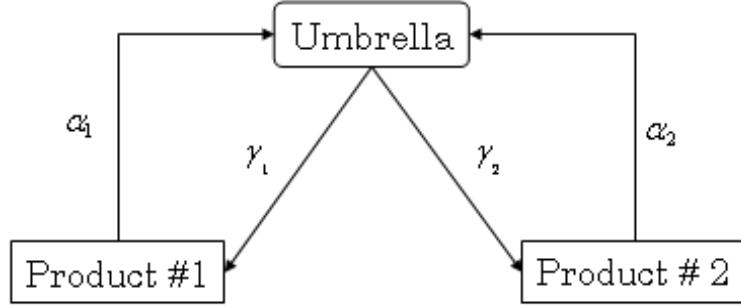


Figure 1 : The 2 products-1 umbrella case

### 3.3 Some tests for the collective reputation phenomenon

Detecting the presence of a collective reputation phenomenon in the framework of system (9) is trivial. Basically, the condition is that at least one of the  $\gamma$  coefficients be statistically different from zero.

On the other hand, testing the accuracy of Julius Caesar's intuition is not straightforward given that one cannot be in both situations at the same time; one cannot be "first in a little Iberian village" and "second in Rome". Suppose however that it is virtually the case for a given individual (individual #2), who has a tradeoff between to be a follower of a famous organization (Umbrella  $U_1$  - system #1) and to be a leader of a second-rank organization

(Umbrella  $U_2$  - system #2). In this framework  $R_{U_1} > R_{U_2}$ . For ind. #2 to be a follower in the first system and a leader in the second one, one has to satisfy the following condition with respect to the other individuals, namely ind. #1 and ind. #3 :  $R_1 > R_2 > R_3$ . Let's indicate also that ind. #3 –because of a low reputation level– is not eligible in  $U_1$ . Indeed, the famous organization will protect itself from the entry of "poor" fellows who would undoubtedly decrease the group's collective reputation  $R_{U_1}$ .

$$\begin{cases} \text{System \#1: "Second in Rome"} \\ q_{iU_1}^e = \alpha_0 + \alpha_1 q_{i1}^e + \alpha_{2F} q_{i2}^e + \alpha_{U_1} X_{U_1} + \varepsilon_0 \\ q_{i1}^e = \beta_1 + \gamma_1 q_{iU_1}^e + \delta_1 X_1 + \varepsilon_1 \\ q_{i2F}^e = \beta_{2F} + \gamma_{2F} q_{iU_1}^e + \delta_{2F} X_2 + \varepsilon_{2F} \end{cases}$$

$$\begin{cases} \text{System \#2: "First in a little Iberian village"} \\ q_{iU_2}^e = \alpha'_0 + \alpha_{2L} q_{i2}^e + \alpha_3 q_{i3}^e + \alpha_{U_2} X_{U_2} + \varepsilon'_0 \\ q_{i2L}^e = \beta_{2L} + \gamma_{2L} q_{iU_2}^e + \delta_{2L} X_2 + \varepsilon_{2L} \\ q_{i3}^e = \beta_3 + \gamma_3 q_{iU_2}^e + \delta_3 X_3 + \varepsilon_3 \end{cases}$$

According to Julius Caesar,  $R_{2L}$  ( $R_2$  when ind. #2 is a leader...) is supposed to exceed  $R_{2F}$  ( $R_2$  when ind. #2 is a follower...) even if  $R_{U_1} > R_{U_2}$ . This is probably due to the fact that  $\gamma_{2L} \gg \gamma_{2F}$ . We derive from this example a series of four general propositions :

**Proposition 1** : *The higher the reputation level, the greater the value of  $\gamma$ , the umbrella effect, i.e. the intensity with which an individual or a product derives benefits from the group's reputation.*

Statistically, this proposition is based on the following assumptions :

$$\begin{cases} H_0 : \text{Corr} (\gamma_j, R_j) = 0 \\ H_1 : \text{Corr} (\gamma_j, R_j) > 0 \end{cases}$$

$H_0$ , the hypothesis that  $\gamma_j$  and  $R_j$  are independent may be assessed either through a Spearman rank correlation coefficient or from the degree of significance of  $\pi_1$ , coefficient of  $R_j$  in the following OLS regression :

$$\gamma_j = \pi_0 + \pi_1 R_j + u \quad (10)$$

The conclusion of the test should be that Julius Caesar's intuition is accurate if the data reject  $H_0$ , otherwise inaccurate (or not right should one say).

**Proposition 2** : *The higher the reputation level, the greater the value of  $\alpha$ , i.e. the intensity with which an individual, through his/her own reputation, contributes to the group's reputation.*

This proposition is based on the following assumptions :

$$\begin{cases} H_0 : \text{Corr} (\alpha_j, R_j) = 0 \\ H_1 : \text{Corr} (\alpha_j, R_j) > 0 \end{cases}$$

and will be tested in the same way as the preceding one.<sup>6</sup>

**Proposition 3** : *The intensity with which an individual or a product takes advantage of the umbrella, is not proportional to the individual reputation level : the relationship between  $\gamma_j$  and  $R_j$  is non linear.*

**Proposition 4** : *Our contribution to the group's reputation is not proportional to our reputation level : the relationship between  $\alpha_j$  and  $R_j$  is non linear.*

A simple way to test propositions #3 and #4 is to check first whether every coefficient is significantly different from 0 or not. If some of them are not significantly different from 0, then the relationship is not linear. Otherwise, the test should be implemented from the degree of significance of  $\pi_2$  and  $\pi'_2$ , coefficients of  $R_j^2$  in the following OLS regressions :

$$\gamma_j = \pi_0 + \pi_1 R_j + \pi_2 R_j^2 + u \quad (11)$$

$$\alpha_j = \pi'_0 + \pi'_1 R_j + \pi'_2 R_j^2 + u \quad (12)$$

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<sup>6</sup>Actually, instead of  $\gamma_j$  and  $\alpha_j$ , we use the respective z-stats.

From this equation, one could conclude that the considered relationship is linear, concave or convex where  $\pi_2$  is respectively  $= >$  or  $< 0$ .

### 3.4 Estimation procedure

If this model can easily be estimated using either limited-information (2SLS or LIML) or full-information methods (3SLS or FIML) when  $q_j^e$  is of the continuous type, i.e. when consumers give quality grades to the products ; the procedure is all but trivial when  $q_j^e$  is dichotomous, i.e. when consumers only have a choice between two polar alternatives : good quality (1) / bad quality (0). In this case, the system in question can conveniently be assessed through a probit two-stage or 2SP procedure (see Maddala, 1983: 245-247), especially when the number of equations exceeds three.

## 4 The dataset

The data are survey data collected during the year 2001 in several European countries <sup>7</sup>: Belgium (1028 wine consumers<sup>8</sup>), Denmark (613 wine consumers), Germany (1133 wine consumers), France (819 wine consumers),

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<sup>7</sup>Source : Sociovision / CIVB, 2001.

<sup>8</sup>In this survey wine consumers drink wine at least once a quarter.

The Netherlands (1258 wine consumers), Switzerland (584 wine consumers), United-Kingdom (959 wine consumers). As a whole, 6394 individuals have been surveyed. 51.21% of them are women and the sample age is 46.2 years old on average. 21.63% declared to belong to the upper class, 60.65% and 17.18% to the middle and lower-class respectively (0.54 did not answer to this question). 0.68% consider themselves as experts, 3.29% as fairly knowledgeable wine-lovers, 28.17% as fairly ignorant wine-lovers, 18.69% as beginners; 33.52% estimate that they are not gifted in wine and finally 14.81% feel fully ignorant (0.83% have no opinion). Table 1 gives details on their wine consumption habits.

[Insert Table 1 around here]

The data mainly concern their opinion on quality of Bordeaux wines in general (BDX) and on a series of nine more specific categories of Bordeaux wines : Médoc (MDC), Entre-deux-mers (E2M), Graves (GR), Bordeaux Supérieur (BSUP), Saint-Emilion (SEM), Margaux (MGX), Côtes de Bourg (CBG), Premières côtes de Bordeaux (PCB) and Sauternes (SAUT). BDX is a regional appellation, the other ones are either generic appellations (BSUP), local/village appellations (SEM, MGX, CBG, PCB, SAUT) or sub-regional

appellations (MDC, E2M, GR). In what follows, BDX will be an umbrella for the other 9 appellations (see figure 2).

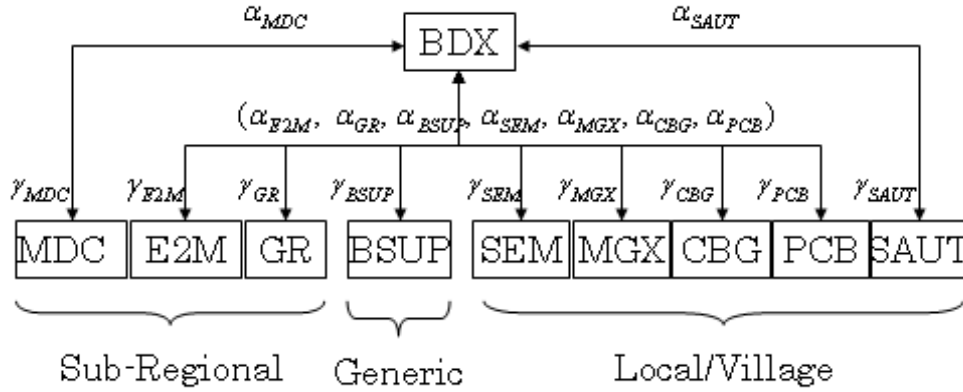


Figure 2 : Individual and collective reputation effects for Bordeaux wines and related appellations

Table 2 relates some summary statistics concerning reputation and goodwill levels for each appellation. For goodwill, people had to tell whether Yes (1) or No (0) they knew appellation X. For reputation, people had to answer whether they considered (1) or not (0) appellation X as a high quality one.

[Insert Table 2 around here]

Table 3 indicates how, on average, people see each appellation and whether or not the appellation has been tasted during the last 12 months. The wine

may be perceived as "Trendy", "Ordinary", "User-friendly", "Formal", "Simple", "May be tasted apart from meal", "Easy to drink", "Complicated", "Will never buy", "Inspire confidence", "Expensive", "Traditional", "Pleasure", "Festive". All these items are dummies, which take the value 1 when the consumer considers that the appellation has the so-called characteristic, otherwise 0.

[Insert Table 3 around here]

## 5 Estimation strategy

In this section the reputation model (9) is applied to the case of Bordeaux wines. Here,  $q_j^e$  are all dichotomous variables and the system is made of 10 equations : 9 appellations + 1 umbrella and the appropriate estimation procedure is the two-stage probit procedure (cf. Maddala, 1983, pp. 245-247, model 6).

- Dependent variables : good quality (0/1) ;
- First-stage estimates : linear regressions (Angrist and Krueger, 2001);
- Second-stage estimates : probit ML.

## 6 Results

- Proposition #1 and 3 :

Corr (umbrella impact, reputation)  $> 0$

The relationship is non linear.

Umbrella impact =  $-0.84 + 0.22$  Reputation  $+ \hat{u}$

(-0.45) (2.45)\*\*

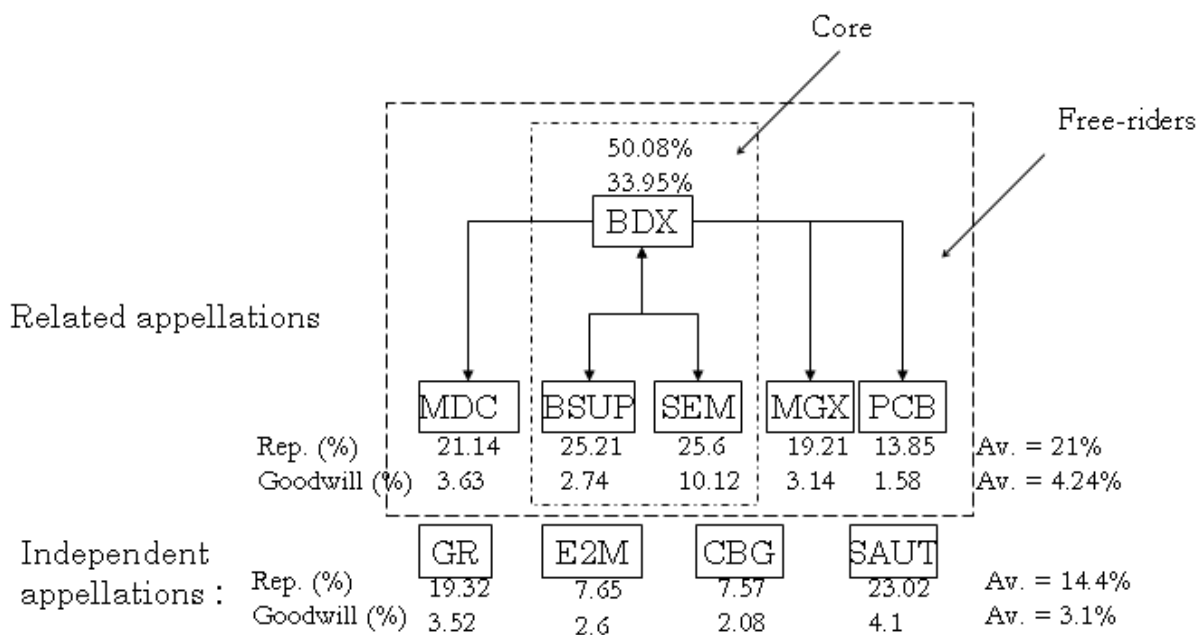
- Proposition #2 and 4 :

Corr (contribution to the umbrella, reputation)  $> 0$

The relationship is non linear.

Contribution to the umbrella =  $-3.27 + 0.23$  Reputation  $+ \hat{u}$

(-1.73) (2.53)\*



[Insert Table 4 around here]

[Insert Table 5 around here]

[Insert Table 6 around here]

## 7 Conclusion

- In the case of Bordeaux wines only the leaders derive benefits from and contribute to the umbrella, the followers do not !

- These results could suggest that a "First in a Little Iberian Village" strategy is probably more efficient than a "Second in Rome" one.

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## Appendix

**Table 1: Wine-drinking habits (% of consumers)**

Consumption frequency	Red wine	White wine	Rosé wine
Daily	11.9	2.74	1.39
Weekly	26.48	19.44	7.57
Monthly	27.31	30.97	13.17
Quarterly	13.83	20.24	13.06
Exceptionally	9.37	15.56	27.79
Never	10.68	10.62	36.29
Do not know	0.43	0.44	0.73

**Table 2 : Goodwill and Reputation levels\***

Appellation	Goodwill		Reputation	
	%	Rank	%	Rank
Regional (Umbrella) :				
Bordeaux (BDX)	33.95	1	50.08	1
Generic :				
Bordeaux Supérieur (BSUP)	2.74	7	25.21	3
Sub-regional :				
Entre-deux-mers (E2M)	2.6	8	7.65	9
Médoc (MDC)	3.63	4	21.14	5
Graves (GR)	3.52	5	19.32	6
Local/village :				
Saint-Emilion (SEM)	10.12	2	25.6	2
Margaux (MGX)	3.14	6	19.21	7
Côtes de Bourg (CBG)	2.08	9	7.57	10
Premières Côtes de Bordeaux (PCB)	1.58	10	13.85	8
Sauternes (SAUT)	4.1	3	23.02	4

\* For goodwill, people had to tell whether Yes (1) or No (0) they knew appellation X. For reputation, people had to answer whether they considered (1) or not (0) appellation X as a high quality one.

**Table 3 : What people think about Bordeaux wines and related appellations? (% of answers)**

Items	Bordeaux BDX	Bordeaux Supérieur BSUP	Entre-deux- mers E2M	Médoc MDC	Graves GR	Saint- Emilion SEM	Margaux MGX	Côtes de Bourg CBG	Premières Côtes de Bordeaux PCB	Sauternes SAUT
Tasted during the last 12 months	23.55	10.15	7.77	7.41	7.6	20.55	5.86	4.72	4.69	11.23
Trendy	25.88	14.81	6.88	13.98	20.75	16.77	9.43	3.79	6.7	12.9
Usual	5.71	4.72	6.83	5.4	17.73	2.64	1.64	7.94	2.3	2.21
User-friendly	19.28	10.81	5.77	10.01	14.15	11.46	6.52	7.69	5.52	11.76
Formal	24.51	13.09	6.47	11.96	15.9	14.48	14.42	2.56	6.78	10.05
Simple	17.12	7.98	6.99	7.77	16.7	6.04	2.38	12.33	3.88	3.78
May be tasted apart from meal	21.94	11.18	6.3	10.12	17.65	9.93	5.55	2.8	6.86	16.18
Easy to drink	16.81	8.48	5.99	9.18	17.73	9.04	4	7.33	4.18	11.48
Complicated	9.68	6.69	8.13	6.32	8.03	7.4	9.49	5.25	6.78	4.56
Will never buy	4.68	4.38	8.73	4.58	10.81	5.18	8.45	3.66	5.12	4.63
Inspire confidence	37.39	18.5	5.4	16.11	19	17.39	10.24	7.08	7.55	11.9
Expensive	38.24	29.29	11.2	20.3	19.87	29.62	26.1	6.96	17.45	32.36
Traditional	51.78	17.28	6.07	15.86	22.1	16.12	8.46	8.91	7.21	14.11
Pleasure	25.9	12.62	5.08	12.15	12.16	13.81	8.98	6.47	6.54	14.26
Festive	40.46	23.27	8.57	19.6	16.21	25.87	20.03	6.47	13.07	27.01

**Table 4 : Reputation equations (two-stage probit estimates)**

Dependent variable : Good quality	Generic appellation		Sub-regional appellations					
	Bordeaux Supérieur BSUP		Entre-deux-mers E2M		Médoc MDC		Graves GR	
	Δ prob.	z	Δ prob.	z	Δ prob.	z	Δ prob.	z
<i>Country:</i>								
France	dropped	-	dropped	-	dropped	-	-	-
Germany	0.041	1.78	0.036*	3.07	-0.072*	-4.43	-	-
United Kingdom	-0.002	-0.06	-0.009	-0.59	-0.099*	-4.03	-	-
Belgium	0.018	0.81	0.009	0.78	-0.043*	-2.63	-	-
Switzerland	-0.031	-1.23	-0.003	-0.26	-0.066*	-3.43	-	-
Denmark	-0.002	-0.07	0.023	1.45	-0.028	-1.14	-	-
The Netherlands	0	0.02	0.022°	2.04	-0.046*	-2.83	dropped	-
<i>Idiosyncratic characteristics:</i>								
Tasted during the last 12 months	-0.041°	-2.05	0.019	1.84	0.03	1.57	0.034	0.94
Trendy	0.177*	10.16	0.097*	8.71	0.152*	9.55	0.251*	8.3
Ordinary	-0.118*	-4.96	-0.039*	-5.13	-0.108*	-6.05	-0.112*	-3.89
User-Friendly	0.141*	7.25	0.041*	3.85	0.13*	7.19	0.004	0.13
Formal	0.131*	7.32	0.081*	7.15	0.141*	8.5	0.11*	3.57
Simple	-0.03	-1.43	0.014	1.34	0.02	1.08	-0.008	-0.23
May be tasted apart from meal	0.114*	6.05	0.049*	4.74	0.096*	5.52	0.011	0.39
Easy to drink	0.076*	3.56	0.015	1.47	0.058*	3.17	0.107	2.75
Complicated	0.027	1.26	0.008	1.00	0.068*	3.32	0.033	0.82
Will never buy	0.004	0.16	-0.007	-0.94	-0.01	-0.45	0.028	0.74
Inspire confidence	0.211*	13.19	0.13*	9.57	0.204*	12.95	0.218	6.82
Expensive	0.24*	17.93	0.115*	11.99	0.225*	16.52	0.143	4.95
<i>Collective reputation effect:</i>								
Bordeaux expected quality (fitted)	0.281*	5.75	0.037	1.75	0.212*	4.89	0.143	1.28
Number of observations	6394		6394		6394		1258	
Pseudo R <sup>2</sup>	0.2806		0.2932		0.3267		0.3287	
LR	2025.99		1012.69		2155.53		405.89	
Degree of freedom	19		19		19		13	

\* Significantly different from 0 at the 1% level

° Significantly different from 0 at the 5% level

Δ prob. reports the change in the probability for an infinitesimal change in each independent, continuous variable and, by default, the discrete change in the probability for dummy variables.

**Table 4 : Reputation equations (two-stage probit estimates, cont.)**

Dependent variable : Good quality	Local/village appellations									
	Saint-Emilion SEM		Margaux MGX		Côtes de Bourg CBG		Premières Côtes de Bordeaux PCB		Sauternes SAUT	
	Δ prob.	z	Δ prob.	z	Δ prob.	z	Δ prob.	z	Δ prob.	z
<i>Country:</i>										
France	dropped	-	dropped	-	dropped	-	-	-	dropped	-
Germany	-0.138*	-7.76	-0.063*	-4.93	-	-	0.058	3	-	-
United Kingdom	-0.115*	-4.24	-0.088*	-4.32	-	-	0.005	0.28	-	-
Belgium	-0.092*	-5.26	-0.032°	-2.41	-	-	0.035	1.78	-	-
Switzerland	-0.112*	-5.64	-0.065*	-4.44	-	-	-	-	-0.091	-3.04
Denmark	-0.059°	-2.26	-0.072*	-3.92	-	-	dropped	-	-	-
The Netherlands	-0.118*	-6.73	-0.068*	-5.55	-	-	-	-	-	-
<i>Idiosyncratic characteristics:</i>										
Tasted during the last 12 months	0.077*	5.12	0.073*	3.97	0.014	0.73	-0.001	-0.02	0.065	2.53
Trendy	0.179*	10.4	0.149*	8.55	0.104°	2.43	0.113*	5.42	0.082	2.48
Ordinary	-0.084*	-2.65	-0.062°	-2.36	-0.043	-1.6	-0.075*	-3.32	-0.012	-0.13
User-Friendly	0.091*	4.8	0.12*	6.27	0.113*	3.29	0.099*	4.35	0.07	1.94
Formal	0.153*	8.49	0.139*	10.13	0.012	0.3	0.083*	4.29	0.108	2.87
Simple	0.027	1.14	-0.012	-0.47	-0.016	-0.78	0.029	1.18	0.001	0.01
May be tasted apart from meal	0.123*	6.08	0.113*	5.58	0.05	1.16	0.086*	4.3	0.112	3.61
Easy to drink	0.044°	2.17	0.081*	3.44	0.036	1.2	0.055°	2.19	0.016	0.46
Complicated	0.063*	2.76	0.035°	2.42	0.103°	2.46	0.011	0.63	0.097	1.69
Will never buy	0.004	0.14	-0.002	-0.12	-0.018	-0.53	0.003	0.16	0.028	0.5
Inspire confidence	0.239*	13.58	0.196*	11.18	0.173*	4.72	0.228*	9.95	0.29	7.21
Expensive	0.217*	15.88	0.227*	18.82	0.189*	4.87	0.205*	13.24	0.237	9.22
<i>Collective reputation effect:</i>										
Bordeaux expected quality (fitted)	0.262*	5.27	0.205*	5.46	-0.017	-0.31	0.11*	2.81	0.142	1.44
Number of observations	6394		6394		819		3733		1403	
Pseudo R <sup>2</sup>	0.3602		0.4244		0.2537		0.2987		0.281	
LR	2620.64		2654.77		111.44		896.9		425.41	
Degree of freedom	19		19		13		16		14	

\* Significantly different from 0 at the 1% level

° Significantly different from 0 at the 5% level

Δ prob. reports the change in the probability for an infinitesimal change in each independent, continuous variable and, by default, the discrete change in the probability for dummy variables.

**Table 4 : Reputation equations (two-stage probit estimates, end)**

Dependent variable : Good quality	Bordeaux	
	$\Delta$ prob.	z
<i>Country:</i>		
France	dropped	-
Germany	0.018	0.51
United Kingdom	-0.098*	-2.74
Belgium	-0.024	-0.81
Switzerland	-0.013	-0.38
Denmark	-0.111*	-3.05
The Netherlands	-0.095*	-2.84
<i>Idiosyncratic characteristics:</i>		
Tasted during the last 12 months	0.068*	3.46
Trendy	0.147*	7.87
Ordinary	-0.209*	-6.62
User-Friendly	0.021	0.96
Formal	0.083*	4.44
Simple	0.017	0.78
May be tasted apart from meal	0.091*	4.71
Easy to drink	0.027	1.21
Complicated	0.009*	0.33
Will never buy	-0.106*	-2.89
Inspire confidence	0.198	11.83
Expensive	0.205*	12.8
Traditional	0.159*	10.27
Pleasure	0.173*	8.81
Festive	0.193*	11.65
<i>Members expected quality :</i>		
Generic appellations		
Bordeaux Supérieur (fitted)	0.163*	4.08
Sub-regional appellations		
Entre-deux-mers (fitted)	-0.083	-0.99
Médoc (fitted)	0.003	0.07
Local-village appellations		
Saint-Emilion (fitted)	0.108°	2.54
Margaux (fitted)	0.028	0.64
Number of observations	6394	
Pseudo R <sup>2</sup>	0.3137	
LR	2780.25	
Degree of freedom	26	

\* Significantly different from 0 at the 1% level

° Significantly different from 0 at the 5% level

$\Delta$  prob. reports the change in the probability for an infinitesimal change in each independent, continuous variable and, by default, the discrete change in the probability for dummy variables.

**Table 5 : Umbrella impacts, contributions to the umbrella and reputation levels**

7 European countries  
Pooled data

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*Proposition #1: 9 regressions*

Spearman\*

$\pi_1$  \*

0.55 (0.125)  
0.221 (0.044)

*Proposition #2: 5 coefficients*

Spearman\*

$\pi_1$  \*

0.8 (0.104)  
0.229 (0.086)

*Proposition #3:*

# of coefficients significantly different from 0 at the  
5% level

5

# of coefficients non significantly different from 0 at  
the 5% level

4

*Proposition #4:*

# of coefficients significantly different from 0 at the  
5% level

2

# of coefficients non significantly different from 0 at  
the 5% level

3

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\* Prob. value in parenthesis