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The impact of geographic reputation on the value created in Champagne

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With asymmetric information, consumers need to rely on the reputation of wine to define quality before the purchasing. Amongst the tools available for underlining reputation, geographic location is considered to offer high potential. Today, some wines benefit from a country's reputation, some from the renown of a region and some from the local reputation of one specific vineyard, whilst conversely some providers suffer from a weak geographic reputation. There can be a split between producers within one vineyard or region based on varying geographic reputation. This kind of split appears in Champagne, with a range of well-known and less well-known brands and is particularly significant to the small growers who sell wine. This study used a representative sample of these growers to examine how their location impacts on their reputation. The results show that their selling price is influenced by the local system of grading vineyard quality, their distance from traditional regional centres and the presence in their village of growers cited in a national guide.

Key words: champagne, geographic location, reputation, signal, territorial brand.

1. Introduction

When Lancaster (1966) developed the new approach in economics to consumer theory, he considered quality as a set of characteristics which allows consumers to determine the optimal price within their budgetary constraints. Price became the best indicator of quality. However, the notion of perfect information about quality was quickly challenged, and producer cues became the main tools used to move towards market equilibrium (Spence 1973). Suppliers have to invest in acquiring a reputation in order to signal quality, as the inability of prices to reflect quality could lead to market uncertainty (Spence 1976). This observation led to the acceptance that reputation can be one signal to explain prices, especially for experience goods whose quality cannot be evaluated before purchasing (Nelson 1970). Price is indicated between consumers and suppliers but based rather on the latter's reputation than other key factors. Therefore, this paper focuses on suppliers' geographic reputation in order to understand the purchase behaviour of consumers.

We decided to analyse the champagne industry as a practical means of exploring this phenomenon. It is accepted that the role of reputation for

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defining price is quite strong for food products, which are generally considered as experience goods (Quagrainie *et al.* 2003) which can only be evaluated after consumption has occurred. This is especially relevant for the wine industry due to the huge range of asymmetric situations in which consumers find themselves. Of particular interest to us was the place where small champagne growers are situated, and especially the relation of that place to other factors such as formal quality evaluations, the core centres of the champagne industry and the impact and reputation of other producers. The issue has much wider relevance for a range of experience goods, including other foodstuffs and place-related brands.

2. Context

2.1. Signals, cues and the perception of quality

Typically, product attributes, the enjoyment of which forms the key motivation for purchasing, are known through experience. Experience is then used as information for future purchase decisions based on the interaction between memory and sensory experience (Bessy and Chateauraynaud 1995). However, in the absence of direct experience with the product, perceived quality is based on other information available to the consumer (Jacoby *et al.* 1971; Olson and Jacoby 1972), known as signals (economics) or cues (marketing). Cues may be intrinsic and thus bound up in the product attributes, or extrinsic and consequently external to the product – as is the case with price, packaging or advertising (Olson and Jacoby 1972; Olson 1977). Thus, the utility of cues generally and price in particular as a signal of quality is threatened by the difficulty in obtaining information (Grossman and Stiglitz 1980). There can be dysfunctional markets where the average quality of goods offered is low and some suppliers' behaviour is opportunistic (Akerlof 1970). In this context, sellers of high quality products need to implement strategies to signal quality (Viscusi 1978). These strategies, however, are fully dependent on the cost to the purchaser searching for the information which is offered (Zeithaml 1988).

When faced with a high cost of information, the reputation of suppliers appears as one possible extrinsic signal or cue of quality; thus, Spence (1973, p. 356) talks about investment in the acquisition by producers of 'signalling reputations'. In fact, signals of quality may be incomplete, only partially reducing the information asymmetry (Steenkamp 1989). The challenge is to provide information about an attribute in order to develop a reputation which eventually becomes a quality signal and thus reduces the cost of obtaining information (Barzel 1982). Consequently, reputation comes from one or more signals of quality and reduces the need to search for quality cues by informing consumer views of perceived quality – in effect a virtuous circle. Reputation thus sums up all expected quality criteria, symbolising both

objective and subjective expectations (Shapiro 1982); meanwhile, price reflects all the objective and subjective characteristics reflected by the product's reputation (Gerstner 1985; Tadelis 1999). Obviously, it does not remove the issue of intrinsic quality; reputation can be only maintained by ensuring a quality which corresponds to it in the long term when in a competitive environment (Horner 2002).

The fact that quality signals are imperfect and reputation is significant is relevant to the wine industry. Although for Nelson (1974) wine is a nondurable good whose quality information is obtained through experience, other more recent studies have shown the diversity of quality criteria which define the product. Golan and Shalit (1993) stressed the difficulty in explaining the high range of price between two bottles which have very close intrinsic quality. Hedonic pricing approaches have shown that a complex relationship exists between quality and price for wine (Nerlove 1995; Combris *et al*. 1997, 2000; Angulo *et al*. 2000). Amongst them, several have shown the role of reputation in the definition of price, for example, with wines from Bordeaux (Landon and Smith 1997, 1998), Champagne (Gergaud 2000) and Australia (Oczkowski 2001).

2.2. Territorial reputation and wine

Following from the acknowledgement of reputation as a signal of quality, other analyses have attempted to deepen our understanding of it. Thus, several studies have focused on geographic origin to explain the behaviour of consumers (e.g. Schooler 1965; Nagashima 1970), although within the domain of marketing this has concentrated primarily on country-of-origin studies, producing fairly conflicting results (Verlegh and Steenkamp 1999). Less significant in marketing is regional reputation – except for wine.

Wine is an interesting product, because it tends to operate not merely at the level of the individual proprietary brand, but at the level of what economists term the collective brand (Marette *et al*. 1999) and marketing academics the territorial brand (Charters *et al*. 2011). These brands exist because a specific wine is perceived to have an intimate connection with a particular place or territory, from which it cannot be separated, and that regional designation acts precisely as a brand does (that is, it gives value both to the producer (American Marketing Association 2010) and to the consumer (de Chernatony and Macdonald 2003; de Chernatony 2009). Where collective or territorial reputation has been investigated, it has been very much within the context of the food or drinks industries (Van Ittersum *et al*. 2003; Fort and Fort 2006; Bruwer and Johnson 2010) and particularly in the analysis of regional reputation for wine (e.g. Horowitz and Lockshin 2002; Schamel and Anderson 2003). In this context, geographic origin can affect wine purchase decisions positively, at least in some countries (Jover *et al*. 2004).

Consumers of wine may pay much higher prices for a reputable location because they do not have sufficient information overall or they are uncertain about quality. Some wines are seen to profit from a country's reputation (Hamlin and Leith 2006) and some from the local reputation of one specific region or vineyard (Perrouty *et al*. 2006). However, this kind of reputation cannot be totally controlled by suppliers, because the collective brand is shared amongst a number of individual enterprises and may in fact harm them (Perrouty *et al*. 2006). Consequently, we consider that geographic situation can be either a cause of value or an obstacle to higher wine prices.

2.3. Champagne

The champagne industry and the Champagne region form an ideal place to examine the impact of reputation on value and on consumer's perceptions, particularly within the context of a territorial brand. Overall, the industry offers a range of asymmetric information to consumers, focused on production information, the vineyards and wine quality. Champagne has been produced as a sparkling wine for over 350 years, and in that, time has obtained an international reputation for its purported quality. It was established as an elite drink by the middle of the 19th century (Guy 2003) and offered sufficient added value that trademark cases were being launched to protect individual producers' reputations from 1849 onwards in the United Kingdom (Duguid 2003), something that was latter extended to the collective brand (Faith 1988). The champagne brands are very strongly promoted by their owners, much more so than most wines made in other European wine regions. Further, the production techniques used, with blends being produced from the grapes of a number of harvests, have guaranteed the manufacture of a consistent product which varies little, if at all, from year to year, thus offering the consumer consistency.

The industry is split into two parts. There are growers (also known as vignerons) who produce 90% of the grapes, of which there are around 15,000. Many of them also sell some wine – indeed there are over 4,700 of these small producers, responsible for 73% of cellar door sales in the region and 36% of all bottles sold on the French market. Additionally, there are the large merchant negociants – also known as the houses. They only own ten per cent of vineyard land, but sell two-thirds of all the wine produced (including 80% of all exports). They are thus dependent on the growers for their raw material, yet they make almost all the well-known international brands. The appellation (delimited grape growing area) comprises four subregions but two (the *Montagne de Reims* and the *Côte des blancs*) have an especially high quality reputation and are also close to the major centres of population – so receive a lot of attention from visitors. In the heart of these regions are the historic viticultural centres of champagne – Reims and Epernay – home to most of the larger, well-known negociants.

Three grape varieties are planted in the region: chardonnay and pinot noir (which have the best reputation for quality) and pinot meunier. Chardonnay plantings are concentrated on the *Côte des Blancs* and pinot noir on the *Montagne de Reims* and in the region to the far south, the *Côte des Bar*. Pinot meunier tends to dominate in the Marne Valley and a number of outlying areas.

Our particular interest was in the relationship of reputation and the situation of the wines of the smaller producers to the prices charged for their wines. Therefore, we propose to explore two issues: does geographic reputation not totally controlled by the producers of champagne have an impact on the prices charged by them (specifically the growers), and if so, what is its effect?

3. Method

To measure the impact of geographic reputation that is not totally controlled on the price charged by champagne providers, we focused on cellar door sales made by the growers. This study used an explanatory sample of 576 growers who are not listed in the Hachette Wine Guide with defined variables reflecting geographic reputation. The dependent variable is the average price charged by the wine growers. This choice results from the hypothesis that the price of one good reflects its reputation (Gerstner 1985; Tadelis 1999).

We then established four independent variables which constitute geographic reputation in the region. The first one is a geographic variable defined by the *echelle de crus* of champagne – thus the local grading of vineyard quality. Conversely to other famous wine industry classifications, the *echelle de crus* of champagne focuses on villages and not on producers or individual vineyards. Indeed, the vineyard area has been classified for the quality of its grapes, with the establishment of an unofficial grading in 1911, a scale which is still referred to today. This attributes a rate (80–100%) for each village which contains vineyards, based on its perceived viticultural quality. Seventeen individual villages are graded as *grands crus* (100%), 41 are graded *premiers crus* (90–99%) and 261 are unclassified (80–89%). This *echelle de crus* can be easily recognised by consumers, based on bottle labels and signs at the boundaries of a *grand cru* or *premier cru* villages. Therefore, we assumed that it can influence the price of cellar door sales, with growers belonging to the *grands crus* villages profiting from a better geographic reputation than the others.

The second variable is the distance of the growers' location from one of the historical centres: Epernay or Reims. We assumed that the most renowned sites are close to these centres with attraction decreasing with a greater distance. Therefore, we detect the closer of the historical sites for each grower and measure the distance of their village from it. The measure is in centimetres using an official, national map.

The third variable is the presence or not in the village of a well-known negociant with a potentially global reputation. Previous studies (Charters and Menival 2008; Menival and Charters 2008) have explored the growers' perceptions of the concept of marketing and price. They are influenced by the status of negociants, supposing that these latter are more focused on effective marketing and thus that their wines are worth a higher price. This relationship may have a positive impact by the most renowned negociants on the average price charged by growers because negociants are not considered as competitors but as some kind of superior brand to be followed. To assess this, we used one of the best known French wine guides, (the Hachette Wine Guide 2007), and we noted where there was a negociant situated in the same village as the growers in our sample. The choice of the guide results from its intensive utilisation by French buyers who visit the cellar door of producers and because of its process of selection based on the careful evaluation of producers. In consequence, we assumed that the presence of a listed negociant in the same village as growers could have an impact on the growers' prices.

The last geographic variable is the presence (or not) in the village of other growers also listed in the Hachette Wine Guide. Again, a price–reputation interaction with smaller producers could be significant, even if they lack the international reputation of a negociant.

We also should focus on variables traditionally used for hedonic studies. These include sensory, chemical, objective and climatic variables (Oczkowski 2001). The two-first types of variable were unobtainable in our data collection and cannot be considered here. However, Gergaud (1998) suggest that the sensory variables matter in the price determination of champagne. The objective characteristics, which group name, colour, grape varieties, appellation or vintage together, have been widely considered in hedonic studies (Oczkowski 1994, 2001; Jones and Storchmann 2001; Schamel and Anderson 2003; Lecocq and Visser 2006). Whilst these points are highly relevant for still wines, they lose importance in the case of the champagne. Indeed, champagne has only one appellation, is overwhelmingly of one colour and generally results from a blend of varieties, vintages and villages. This is especially true for growers' wines which mainly comprise *brut sans année* (nonvintage) representing 95% of all their production. Vintage wines remain an exception (1.8% in 2011). Further, the process of production of champagne means that the varying influence of weather from year to year is minimal. Even though these criteria are quite important in explaining the price charged for still wines (Ashenfelter *et al.* 1995; Byron and Ashenfelter 1995), they lose their relevance in the case of interannual blended wine like champagne *brut sans année,* designed to create wines that are consistent from year to year.

Consequently, we worked with only four independent variables as the determinants of the average price of grower wines sold to consumers in Champagne. An OLS regression was used in obtaining the set of estimated regression coefficients. This choice was made to normalise the independent

quantitative variables and to transform the qualitative ones to dummies to test the following general equation:

$$\begin{aligned} PRICE_{it} = {} & Cst + a\,GRANDCRU_{it} + b\,PREMIERCRU_{it} \\ & + c\,GROWERS_{it} + d\,NEGOCIANT_{it} \\ & + e\,DISTANCE_{it} + \epsilon_{it} \end{aligned} \quad (1)$$

where:

$PRICE_{it}$: logarithm of the average price charged by the wine grower i at year t; $GRANDCRU_{it}$: dummy variable with grower i who does not belong to one of the *grand cru* villages at year t as the reference; $PREMIERCRU_{it}$: dummy variable with grower i who does not belong to one the premier cru villages at year t as reference; $GROWERS_{it}$: dummy variable with the situation – 'when none grower of the same village of a grower i is cited in Hachette at year t'– as reference; $NEGOCIANT_{it}$: dummy variable with the situation – 'when none négociant of the same village of a grower i is cited in Hachette at year t' – as reference; $DISTANCE_{it}$: logarithm of the distance of location of the grower i from one of the two historic centres at year t.

In addition, we have to control the geographic reputation by the nationality of the buyers at each grower. This decision was based on previous studies which show that foreign buyers at the cellar door are willing to pay more for a bottle of standard quality champagne than French purchasers (Charters and Menival 2011). This result suggests that champagne has a higher reputation amongst foreigners than with French buyers. The data for this variable were obtained by a question within the survey asking respondents about the origin of consumers visiting their domaine.

- NATIONALITY: dummy variable with the situation 'when the most important nationality of buyers is French' as reference.

Therefore, we have to check the likelihood that the Nationality of buyers interacts with the independent variables:

$$\begin{aligned} PRICE_{it} = {} & Cst + a\,GRANDCRU_{it} + b\,PREMIERCRU_{it} + c\,GROWERS_{it} \\ & + d\,NEGOCIANT_{it} + e\,DISTANCE_{it} \times f\,NATIONALITY_{it} \\ & + g\,NATIONALITY_{it} \times GRANDCRU_{it} \\ & + h\,NATIONALITY_{it} \times PREMIERCRU_{it} \\ & + i\,NATIONALITY_{it} \times GROWERS_{it} + j\,NATIONALITY_{it} \\ & \times NEGOCIANT + k\,NATIONALITY_{it} \times DISTANCE_{it} + \epsilon_{it} \end{aligned} \quad (2)$$

4. Results

In our initial model, OLS regression was used in obtaining the set of estimated regression coefficients from four independent variables, the

Table 1 *F* test of likelihood of interaction between NATIONALITY and the other independent variables

Variables	*F* test[2]
Univariate analysis of variance	
Intercept	91973.810
GROWERS	12.965**
GRANDCRU	202.696**
PREMIERCRU	50.321**
DISTANCE	16.334**

**$P < 0.01$.

dependent one being the logarithm of the average price charged by the wine grower i at year t. Whilst we noticed that the model allows inferences, it must be reduced by an iterative process until the *F* test is guaranteed for all the explanatory variables[1] (Table 1).

After including the presence or otherwise of a negociant cited in Hachette, the nationality of buyers and all the potential interactions of NATIONALITY with the independent variables aside, we obtain a model which allows us to keep the *echelle de crus*, the presence or not of growers quoted in the guide and the distance from one of the two historic centres. This univariate analysis of variance indicates that any impact of the nationality of buyers, NATIONALITY, is statistically insignificant, both as a main and interactive effect and hence should be omitted from the preferred estimate. Therefore, we used an OLS regression model with the significant independent variables to estimate their parameters (Table 2).

This model has a good fit with an R square of 0.478. Otherwise, the conditions of multicollinearity and homoscedasticity are respected thanks to high tolerances and significance for the White's test over 0.05. Moreover, the RESET test confirms the linear functional form chosen here.

In the final model, the higher the level of *cru* is, the higher the price is. When a grower belongs to one of the *premier cru* village, the average price is higher than when he does not belong to this kind of village. This difference of average price is higher when a grower belongs to one of the *grand cru* village. In addition, when none grower of the same village of a grower is cited in Hachette, the average price charged by this grower is higher. Otherwise, the farther the growers are from one of the two historic centres (Reims and Epernay), the cheaper their product is.

The standardised coefficients show that the most important element of the geographic reputation in champagne is the *echelle de crus* (Table 2). The unclassified villages suffer a negative impact compared to those which are *premier cru* and even more compared to those in the g*rand crus*. The second most important element of reputation is the distance from a historical site. Of less importance is the absence of a grower of the same village cited in Hachette.

[1] This and all subsequent results are based on a type I error of 5%.

Table 2 The impact of the geographic independent variables on the price charged by growers

Variables	OLS coefficients			
	Coefficients	T	Standardised estimates	Tolerance
Constant	2.52	303.27	–	–
GROWERS	0.018	3.60**	0.14	0.791
GRANDCRU	0.080	14.24**	0.59	0.735
PREMIERCRU	0.039	7.09**	0.28	0.830
DISTANCE	−0.015	−4.04**	−0.15	0.946
Model diagnostics				Sig.
White's test	1.735			0.125
Reset test	7.449			0.0662
R^2	0.478			–
Total observation	410			

**$P < 0.01$.

5. Discussion

First, the results confirm that geographic reputation can explain a part of growers' prices in champagne. The *echelle de cru* (which established the viticultural status of the village), the distance to the historical centres and the presence of cited growers (with global recognition) all have an impact. These factors are significant whatever the nationality of the buyers at each grower though the impact of the distance from a historical centre is comparatively small as an element of this.

The history of the region demonstrates why the towns of Reims and Epernay became the main centres for champagne production and helped to build its reputation. This happened before sparkling wines were made in Champagne (around 1690), during the development of international markets for French wines (Lachiver 1991). These towns became the main places for shipping champagne and attracted the most renowned and involved merchants of the period. Thus, it is quite logical to find a negative impact on a producer's reputation based on the distance of growers' from these two historical centres. Eventually, compared to others, the growers close to these towns benefited from a weak negative impact of distance on their reputation. Conversely, the farther the grower is from these centres, the higher the asymmetric information is and thus the harder it is to prove the quality of his product. This relationship was first postulated by Hotelling (1929) who explained that distance from the concentration of supply can negatively impact the price gained by suppliers due to transport costs. Nevertheless, in this model and its subsequent development (Greenhut 1956; Isard 1956; Smith 1971; Nero 1998; Alvarez *et al.* 2000), consumers were considered as 'price takers' in a specific location, having no choice about the amount they would have to pay. Therefore, our argument is closer to that of Maier (2009, p. 43) who explained that a 'customer's expected costs of acquiring the

product represents the spatial price of the product at the customer's location'.

Subsequently, when the *echelle de cru* was defined, it was mainly linked to the villages which were the source of grapes for these merchants (the negociants) as the latter had the most economic power. Consequently, the *grands crus* and *premiers crus* were demarcated close to the two historic towns since they were most conveniently situated. That explains the strong impact of the *echelle de cru* on the price charged by the growers.

These factors are reinforced by the impact of experts on both suppliers' and the consumers' behaviour. This double impact has already been underlined in markets other than wine (see Bauwens and Ginsburgh (2000) for the impact on the suppliers in the fine art market and Ginsburgh (2003) for the impact on the consumer's decision about art markets), and the role of critics in economic decision-making has also been examined (Ginsburgh and van Ours 2003). This has been confirmed for the wine industry, notably by the model of Hadj Ali *et al*. (2008) which used previous studies to determine the impact of the scores of the American critic, Robert Parker, on the prices of *en primeur* wines in Bordeaux and found a positive relation for the wines given the highest scores by the critic. This result is even stronger when it incorporates information from the 1855 classification of the wines of Bordeaux (Ginsburgh *et al*. 1994).

Our results for champagne are quite similar. The Hachette Guide seems to mediate an enhancement of the reputation of sellers of champagne. Even though we did intend to measure it, its role emerges from the effect of the growers who are cited in the guide. However, conversely to previous studies, our results allow us to focus on the indirect impact of experts on producers. This is shown notably by the presence of growers cited in Hachette and belonging to the same village as the grower of our sample. Whilst initially surprising, this clear result could be explained by the perception growers have of the concept of marketing and price. Indeed, previous studies (Charters and Menival 2008; Menival and Charters 2008) have shown the complexity and uncertainty of the growers' perceptions about their success. They mainly think that product differentiation comes from their capacity to offer good wines with competitive prices. Therefore, the other growers from the village that are listed in the guide are direct competitors. Growers not listed in the guide have to maintain lower prices to continue to attract nonconnoisseurs precisely because they lack a personal endorsement.

6. Conclusion

The economic quantification of collective or territorial reputation is a project fraught with difficulty, based as the notion is on myriad varying components. These results are a first step in defining some of the elements of geographic reputation in Champagne and its impact on the value created by growers and confirm previous studies on the significance of such a reputation (Landon

and Smith 1997, 1998; Gergaud 2000; Oczkowski 2001). They highlight the impact of the presence of the most renowned growers' brands, the importance of the distance from the historical centres and of the *echelle de crus* on the average price of grower champagnes; all of these factors have an impact on price. Distance, whilst less important than some of the other factors, is interesting. Its presence as an element influencing price tends to challenge traditional notions that the vineyard is the overriding determinant of reputation in French *appellation contrôlée* wine regions, suggesting rather that social and historic (transport-related) factors may have an impact. This confirms the conclusion of Perrouty *et al.* (2006), especially as our results also demonstrate that geographic reputation can be positive and/or negative for growers. Consequently, smaller, less well-known producers, being situated in less reputable villages or further away from the key regional centres, find that adding value to their product is harder. The result may be that other solutions (targeted promotions, wine tourism, selling to consumers with less detailed awareness of the specifics of the region) are necessary to increase sales and add to the potential value of the product. Further, growers who fail to get critical endorsement in a place where others have gained it may lack the necessary strategies to signal quality (Viscusi 1978) and be forced to rely on nothing more than price competitiveness to promote their products.

The results finally suggest that it is necessary to expand the research into other elements of value, origin and marketing to develop a more advanced model for a better understanding of the pattern of geographic reputation. Crucially, location becomes important in the creation of value for these small brands, but not location so much in the sense of terroir (the place-related factors that are claimed to influence a wine's intrinsic quality). Rather, location is important in giving proximity to a regional viticultural centre and to a local grading based on villages – which become two of the key issues in adding to the value produced by the growers. To this extent our study has more in common with Schamel and Anderson (2003), who highlighted producer reputation as a moderating factor on the impact of regional reputation, than with others who have focused more on the relationship of appropriate product types (grape varieties) and ideal environmental conditions (terroir) (Horowitz and Lockshin 2002; Jover *et al.* 2004). Equally, a location related to both of these factors becomes a negative influence when it is combined with the presence of other small brands, positioned at the same market level as that of a grower.

The immediate relevance of this study is for other wine-producing areas. Further, it is significant for a range of products with an origin which gives them a reputation based, in part, on their place. This includes other drinks, such as whisky or cognac, and some foods (cheese, fish, olive oil, fresh fruit), which may want to consider the relationship of place, classification, critical endorsement and producer type as elements in the formation of their reputation.

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Supporting Information

Additional Supporting Information may be found in the online version of this article:

Data S1. Dataset. The impact of geographic reputation on the value created in Champagne.