

# **Italian wine consumer behaviour and wineries responsive capacity**

**Malorgio, G., Hertzberg, A. and Grazia C.**



**Paper prepared for presentation at the 12<sup>th</sup> EAAE Congress  
'People, Food and Environments: Global Trends and European Strategies',  
Gent (Belgium), 26-29 August 2008**

Copyright 2008 by [Malorgio, G., Hertzberg, A. and Grazia C.]  
. All rights reserved. Readers may make verbatim copies of this document for non-commercial purposes by any means, provided that this copyright notice appears on all such copies.

# Italian wine consumer behaviour and wineries responsive capacity

Malorgio, G.<sup>1</sup>, Hertzberg, A.<sup>1</sup> and Grazia, C.<sup>1</sup>

<sup>1</sup> Agricultural Economics and Engineering Department, University of Bologna, Italy

**Abstract**—This paper analyzes habits and motivations behind wine consumption in Italy and focuses on the attributes affecting wine choice, through interviews and a choice experiment approach. We show that consumers are interested in a wide concept of quality, which covers the whole production process. Both the notoriety of the industrial brand and the designation of origin constitute important quality signals. However, the use of the designation of origin to assess quality at the moment of purchase requires a certain level of product knowledge and involvement. Supermarkets and stores play an increasing role in the commercialization of wine on the final market. Nevertheless, the appreciation of private label wines is relatively low. Finally, we provide some observations on how the Italian wineries are equipped toward market requirements, according to the typologies of vertical relationship between the vine growing and the grapevine processing stages, the quantity and quality strategies.

**Keywords** – wine consumer behaviour, choice experiment, wineries strategies.

## I. INTRODUCTION

Global wine consumption in 2006 is estimated to slightly exceed the 240 millions hl. Despite the growth of consumption in new countries, the share of Europe, with 67% in 2006, is declining only slowly; France is still the leading domestic market in 2006, with 32.8 millions hl.

The market in the UK is expected to see a slight stop in its domestic consumption growth cycle. It is noteworthy that USA is approaching the size of the Italian domestic market (25.9m versus 27.3m hl) and domestic demand in Spain and China is becoming similar (around 13.5m hl). As for the traditionally producing and consuming countries, whereas per-capita consumption of total wine has a decreasing trend, an opposite trend is registered when quality wines produced in specific regions are concerned (see Malorgio et al., 2008). Moreover, several studies

highlight the raising importance of occasional high quality wine consumption. As for the Italian market, consumers recognize the Designation of Origin wines as high quality products from the point of view of taste and food safety (ISMEA, 2005) and the interest in this type of quality signal is associated to product knowledge. Several theoretical studies highlight the increasing relevance of objective characteristics (vintage year, grape variety, Designation of Origin, origin, reputation, etc.) on consumer decisions. It is thus noteworthy that a complete understanding of wine consumption trends requires investigating motivations behind consumption and the way product's attributes affect purchase decisions. At international level, the global wine market is characterized by a sharply increasing competition between the "Old-world" and the "New-world" systems. Europe remains the main exporting continent (71% in 2006), but significantly declines with respect to the end of the 1980s when it was practically unrivalled. It is noteworthy that the relative weight of the five leading EU exporters in volume on the global market share has declined to the benefit of what is commonly called the "new viticulture world", which is expected to account in 2006 for around 28% of world trade.

Whereas European suppliers are constrained from restrictions on grape varieties, maximum yields and alcohol content, vine density and vine training systems, the large companies of New World producing countries have the capacity to exploit the rapidly growing markets through both large volumes of consistent, low-priced, easily approachable (fruity) premium wine and mass marketing. Similarly, at the domestic level, the competitiveness of Italian wineries depends on some critical factors, among which the marketed volumes, the possibility to undertake long term quality investments and strong promotional efforts towards the final market (and for some of them, internationalization of production and commercialization systems).

The objective of this paper is twofold. First, we analyze habits and motivations behind wine consumption in Italy and focus on the attributes affecting wine choice, through a choice experiment approach. Second, given the main traits of consumer behaviour, we provide some considerations on the capacity of Italian wineries to respond to market requirements. After a brief illustration of the theoretical background in section 2, sections 3 - 4 concern the methodology and the results of the analysis of consumer preferences, respectively. Finally, section 5 provides some considerations about supply response.

## II. ATTRIBUTES AFFECTING WINE CONSUMPTION

The increasing product differentiation and qualitative improvements have increased the number of attributes defining the product and being appreciated by consumers. Sensorial attributes are those, which are most related to the wine's intrinsic quality. They are cited as important factors, when qualitative interviews are concerned. Nevertheless, when econometric analyses are carried out, the results are quite different. Hence, it is shown that prices – supposed to indicate the level of appreciation by consumers – mainly depend on objective attributes and reputation, rather than on sensorial characteristics (Combris, Lecocq and Visser, 1997; Landon and Smith, 1998; Oczkowski, 2001; Benfratello, Piacenza and Sacchetto, 2004).

Objective attributes are those that consumers can directly observe to assess quality before purchase (price, origin, grape variety, vintage year, designation of origin, private label, alcohol content, place where the wine is bottled, etc). As for price, several studies show that it is usually used in assessing product's quality and increase the likelihood of product success (Mitchell and Greatorex, 1989). Consumers often know the price range where the bottle they are going to buy will be located, even before getting to the point of sale. For expert consumers, the price plays a less important role, since further information is available. Several marketing studies show how consumers are positively affected by the knowledge of product's origin (Bilkey and Nes, 1982; Al-Sulaiti and Baker,

1998). Each region consists of several environmental – natural (type of soil, climate) and human (viticulture practices, specific knowledge) factors. The origin refers to the concept of terroir, which also considers factors as the position and orientation of the vineyard. The indication of origin on the bottle of wine creates expectations of quality. Only a few contributions analyze the role of the designation of origin in consumer purchase choices. Nevertheless, the few existing results show that this attribute is one of the most important ones. Skuras and Vakrou (2002) point out, through a contingent valuation analysis, that consumers are willing to spend twice the price of a table wine in order to get a wine with designation of origin. As for Spain, Bernabéu et al. (2005) use a contingent ranking analysis to show that the presence of a certification is the most relevant attribute in the choice of a wine. Other choice experiments deal with the choice among different designations of origin, without taking into account table wines (Mtimet and Albisu, 2006). The individual brand allows the consumer to identify the product and link it to past experiences and/or to a well-defined producer; then the guarantee provided by the brand represents a risk-reducing strategy for consumers. In general, brands or individual producers are generally classified according to the size or to the average quality of the wines produced or to guides scores (Landon and Smith, 1998). Jarvis, Rungie and Lockshin (2003) show that consumers are more likely to switch from a brand to another, than from a region to another; the loyalty in the region thus appears to be higher than the brand loyalty. Other relevant objective attributes are the grape variety, the vintage year, which may affect the price to a higher extent than the sensorial characteristics (Lecocq and Visser, 2006), but to a lower extent than the geographical origin and the designation (Angulo et al., 2000).

## III. METHODOLOGY

Interviews have been carried out in order to investigate wine consumer's habits and attitudes, to identify the attributes that affect the choice of a bottle and to quantify their importance. The target population consisted of wine-buyers in North-Eastern Italy. Interviews took place in the form of an intercept

survey. 440 valid questionnaires were collected during February and March 2007, in selected shopping centres and supermarkets, located in two different regions (Friuli V. G. and Emilia Romagna) and heterogeneous areas. The variables collected by the questionnaires were: basic socio-demographic data, frequency and amount of wine consumed, type and price range of wine for daily use, typology of point of sale where the wine is usually bought, product involvement, and product objective knowledge. Two questions dealt with motivations behind choice and purchase: one asked the key product attributes that influence a purchase selection and the other one researched potential motivation for buying a product that has never been bought before.

A choice experiment (Louviere and Hensher, 1982; Louviere and Woodworth, 1983) was also included in the questionnaires. It aimed at quantifying the effects of four selected attributes (reported in Table 1) on the consumer's choice process of a bottle of wine for daily home consumption with the family, in a supermarket. Choice experiments derive from the random utility theory that assumes that consumers choose the product that yields greatest utility. Therefore the probability to choose alternative  $j$  from a choice set  $C_n$  equals the probability that the level of utility produced by  $j$  exceeds that produced by all the other alternatives  $i$  in  $C_n$ .

In other words:

$$P_j(X_j, C_n) = P(U_j \geq U_i) \quad (1)$$

for each  $i \in C_n, i \neq j$ .

Consumer's utility is assumed to be made up of two parts:

$$U_j = V_j + \varepsilon_j \quad (2)$$

$V_j$  is a deterministic component depending on consumer characteristics and product attributes, that can be observed and estimated;  $\varepsilon_j$  is a random component, unknown by definition, that accounts for errors in measurement and in functional specification, as well as non-observable components that affect choice.

Substituting (2) into (1), we obtain:

$$P_j(X_j, C_n) = P[(\varepsilon_i \leq (V_j - V_i + \varepsilon_j))] \quad (3)$$

$\varepsilon_j$  cannot be known, but under the hypothesis that they follow an extreme value type 1 or Gumbel distribution (McFadden, 1974), the probability of consumer choosing alternative  $j$  takes the form of a multinomial model:

$$P_j(X_j, C_n) = \frac{\exp(V_j)}{\sum_{i=1}^J \exp(V_i)} \quad (4)$$

$V_j$  is specified as a function of product (and consumer) characteristics:

$$V_i = \beta_1 f(X_1) + \beta_2 f(X_2) + \beta_3 f(X_1 X_2) + \dots \quad (5)$$

The choice experiment yields data indicating the values assumed by  $P_j(X_j, C_n)$ , with the corresponding values assumed by the attributes  $X_1, X_2, \dots$ , thus allowing the estimation of the weights  $\beta_1, \beta_2, \dots$  that represent the relative importance of the attributes on consumer choices.

The function (5) can assume several forms. The present experiment assumes an additional relationship; main effects only models and main effects plus two way interactions models have been estimated, including different sets of variables.

The estimated parameters are named marginal utility coefficients, as they represent the effect of each variable (or interaction) on the consumer's marginal utility. When the model includes a price attribute, as in this experiment, it is possible to derive a monetary valuation of the attributes effects. The knowledge of the relationship between price and utility enables the estimation of the willingness to pay for each attribute.

If in (5)  $X_2$  represents price, then willingness to pay for attribute  $X_1$ , holding everything else constant, is the amount that the consumer is willing to pay for a unitary increase of  $X_1$ . The WTP can therefore be derived as the amount that, added to the price of a product with the base level of  $X_1$ , would compensate the variation in utility arising from the change in  $X_1$ . In other words, it represents the point where the individual would be indifferent between the utility of a product with the original levels of price and  $X_1$ , and the utility of a new product with an increased  $X_1$  and a

new price level (Burton et al., 2002; James and Burton, 2003).

In a linear additive model, WTP for an attribute is found to be equal to the ratio between the attribute coefficient and the cost variable. As described subsequently, in the present experiment the relationship between utility and price is not linear but quadratic: this generates a WTP represented by a continuous, quadratic function of price, rather than a single number (Hertzberg, 2009).

**Table 1** –Attributes of the choice experiment.

Attribute	Meaning of the dummy variable
<i>presence of the designation of origin</i>	presence of the designation of origin
	absence of designation of origin
<i>price</i>	7 € price
	5 € price
	3 € price
	1 € price
<i>producer's notoriety level</i>	nationally known brand
	regionally known brand
	private label
	unknown brand
<i>presence of the grape variety information on the label</i>	presence of the grape variety information
	absence of the grape variety information

#### IV. RESULTS

##### A. Results of the survey

The correlation among habits and motivations has been analysed in order to characterize consumer behaviour. Several criteria may be used to illustrate the relevant relationship among the different habits and motivations behind consumption.

**Occasional – habitual consumers.** Occasional consumers spend more and buy more frequently at the supermarket and at specialized shops. They pay attention both to the Designation of Origin and to the notoriety of the brand. However, they pay relatively lower attention to the area of origin and the vintage year; they poorly react to collective brand advertising and they are weakly influenced by the information presented in the label. Habitual consumers seem to be

more expert than occasional consumers and thus have a higher level of knowledge and a higher product involvement.

**Table 2a** – Distribution of the sample according to the collective variables.

<b>Weekly frequency of consumption</b>	
never	2%
less than 1	18%
1-2	27%
3-5	18%
6-7	36%
<b>N° of glasses drunk every week</b>	
less than 1	16%
1-2	14%
3-5	22%
6-14	28%
15-28	15%
more than 28	4%
<b>Type of wine usually bought</b>	
DOC bottled	59%
non DOC bottled	13%
DOC bulk	14%
non DOC bulk	11%
brick	3%
<b>Avg bottle price for usually consumed wine</b>	
less than 1,5€	7%
1,5-3€	23%
3-4,5€	26%
4,5-6€	23%
6-7,5€	11%
more than 7,5€	10%
<b>Main point of purchase</b>	
supermarket	46%
producer	37%
specialized shop	12%
traditional food store	3%
other	2%
missing	0%

**Bulk/bottled – doc/non doc consumers.** Bulk wine consumers tend to drink wine every day and between 6 and 14 glasses per week; they usually spend between 1.5 and 3 Euros per bottle. They mainly directly purchase at the farm and pay high attention on direct knowledge of the producer. Among bottled wine consumers, doc wine consumers are characterized by a slightly higher frequency of purchase and a higher consumed quantity; their higher product knowledge may be thus explained by a higher product

consumption/usage. Furthermore, doc wine consumers spend more.

**Table 2b** – *Distribution of the sample according to the collective variables.*

<b>Most important in wine purchase selection</b>	
Designation of Origin	20%
taste	24%
personal producer knowledge	15%
producer notoriety	8%
price	11%
grape variety	7%
origin	13%
vintage year	2%
missing	1%
<b>Most effective promotional mean</b>	
friend advice	43%
tasting (in bar or restaurant)	22%
label	14%
collective brand advertising	7%
industrial brand advertising	2%
experts' rating-judgments	5%
always buys the same wine	5%
missing	2%
<b>Product involvement level</b>	
1-2	3%
2-3	23%
3-4	50%
4-5	25%
<b>Product knowledge level</b>	
0	10%
1	16%
2	26%
3	23%
4	25%

**Relevant attributes.** As shown by Table 2b, taste, Designation of Origin and brand play a relatively more important role in determining purchase decisions, than wine's origin and price, followed by grape variety and vintage year. Price-sensitive consumers buy more frequently bottled-non doc wines. Price ranges vary according to the typology of attribute preferred. The highest average price spent is associated with the attribute "grape variety".

Finally, the survey has shown that the bottled-doc wine is the most frequently purchased typology, except for consumers, who assign the highest relative weight to the price attribute. More interesting is the relative importance of the presence of the designation of origin, regardless of the price segment.

Supermarkets and stores represent the favourite purchase channel. As for the most effective promotional mean, the value assigned to experienced consumers suggestions is relatively more important than any other form of promotion.

### *B. Results of the choice experiment*

Wine consumers are interested in a wide concept of quality, which covers not only the aspects related to the taste, but also the hygienic – sanitary quality and the attention to where the product comes from (importance of origin) and how it is processed. This concept of quality thus starts from the quality of input and production conditions and also concerns the production process. For an experience good like wine, consumers tend to use quality signals, at the moment of purchase, in order to increase their probability of satisfaction.

The choice experiment aimed to assess the relative importance of the attributes shown in Table 1 in the choice process. The highest weights are assigned to the wine variety, to the brand, with a local or national notoriety and to the Designation of Origin (doc or geographical indication igt). The interest in the grape variety and the preference for a local-wide known brand could indicate, if jointly considered, consumers appreciation to the product's origin, the production techniques, the *terroir*. The Designation of Origin lower influence, when compared to the variety or the brand, might derive from its lower "accessibility". Namely, occasional consumers seem to have difficulties in using this quality signal and prefer the brand attribute.

Habitual consumers have greater product knowledge: they seem to evaluate the product in a more complete and sophisticated way, since they consider each attribute jointly with the other attributes; while the occasional consumers consider each single attribute separately from the others.

More generally, a wider difficulty appears in using the information provided by the label to assess the quality level before purchase. Indeed, the strategy, which is more frequently used in assessing the quality level, is represented by friends' suggestions. In a context where consumers face imperfect information about product's attributes, they tend to minimize their expected research costs, by using simple and risk-

minimizing quality signals. Moreover, the scarce attention paid to the information provided by the label could be also related to a not sufficiently clear system and/or an insufficient promotional effort undertaken by the firms.

The relative weight of the private label seems relatively low, except for low price segments. For price ranges above 5€, the effect of the private label become negative, i.e. its presence decreases the choice probability. Moreover, the private label appears to be more appreciated by inexpert, uninvolved and aged (and occasional) consumers. The low weight of the private label may be explained by a relatively high attention to tradition and local dimension of the product.

The price is significant, but to a lower extent than the other attributes. The optimal price level is identified between 3.5 and 4 Euros. This perfectly reflects the distribution of the respondents according to the price usually spent. Moreover, the analysis shows that the optimal price level for habitual consumers is 1 Euro lower than the one for occasional consumers (2.9 Euros against 3.9 Euros).

## V. WINERIES CAPACITY TO RESPOND TO MARKET REQUIREMENTS

### A. Wineries classification according to quantity and quality strategies

Given the main results highlighted by the analysis of consumer preferences, the objective of this section is thus to characterize the wine supply and given some highlights on whether (and how) it is equipped to respond to consumer demand.

More in general, in the agricultural and food sector, the quality of the processed product derives from the quality of upstream inputs and is highly affected by the heterogeneity of upstream production conditions. Moreover, the quality of the final product results from the typologies of vertical relationship along the whole supply chain as well as from the procurement strategies of downstream processing and/or retailing firms towards upstream suppliers.

In this section of the paper, we thus aim at classifying the wineries according the degree of vertical integration between the upstream stage of

grape growing and the downstream stage of wine processing, the final product here being the processed wine, and cross this information with the wineries' strategic choices of quantity and quality. More specifically, we have used a database, which has been created starting from the grape and wine production declarations in the year 2006 (Source: AGEA). These data thus represent the entire population of Italian wineries. Nevertheless, unfortunately, these data only cover the stages of vine growing and grapevine processing, without allowing estimating the quantity of processed wine sold on the intermediary spot market of bulk wine or bottle and sold on the final market, for each declaring winery. These data do not allow crossing the available information about each winery (size, quantity produced, type of grape or wine produced, juridical form, degree of plant's specialization, etc.) with the strategic choices of firms towards the final market.

We thus identify three types of wineries, according to the degree of vertical integration between the vine growing and the grapevine processing stages, 1) *Agricultural wineries* (or wineries with vineyard): vertical integration between the upstream stage of grape production and the downstream stage of wine processing; 2) *Industrial wineries* (or wineries without vineyard): these wineries only process grapes bought on the grape spot market or through direct relationships with upstream producers; 3) *Cooperatives*: these wineries process the grape received by the associated upstream vine growers. These typologies of wineries have been crossed with a set of selected variables. In this paper, we focus on the quantity of produced wine and on the wine's typology (Table wines, Geographical Indication wines and Appellations of Origin).

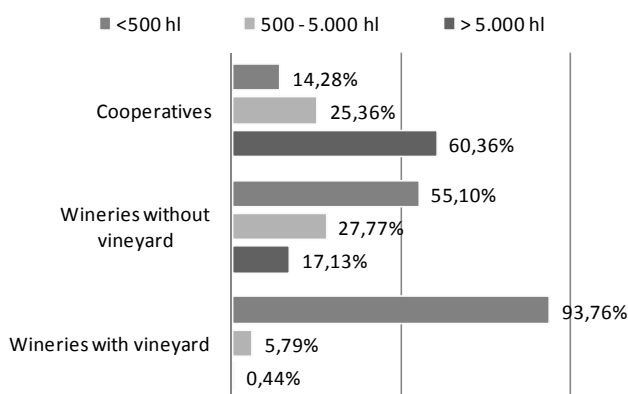
**Table 3** – Wineries and wine production (2002-2006): the relative importance of each typology.

	Weight on the total number of wineries	2002- '06	Weight on the total wine production	2002- '06
Agricultural wineries	95%	2	22%	-3
Industrial wineries	4%	-2	29%	2
Cooperatives	1%	0	49%	1
<b>Total</b>	<b>100%</b>		<b>100%</b>	

It is noteworthy that the most relevant wine production in Italy comes from the cooperatives (49%), which represent the typology of winery with the highest average plant size. Agricultural wineries contribute up to 22% to the total production. Furthermore, the relative weight of industrial wineries increases in terms of wine production, whereas it decreases in terms of number of plants. Indeed, as shown by Table 3, there is a trend towards concentration at the downstream processing stage and on opposite trend to fragmentation at the upstream vine growing stage. Moreover, the data show an increase of the grape's quantity processed by the industrial wineries. There is thus evidence of a potential increase of the quantity transacted outside a vertically integrated channel, either on the intermediary spot market or through contractual relationships between vine growers and wineries. Nevertheless, it is noteworthy that the typology of wine produced plays a crucial role in determining the relative weight of each channel. Hence, 85% of the total AO wine production comes from vertically integrated channels (vine growing – grapevine processing), whereas this percentage falls under 50% in the case of Table wines.

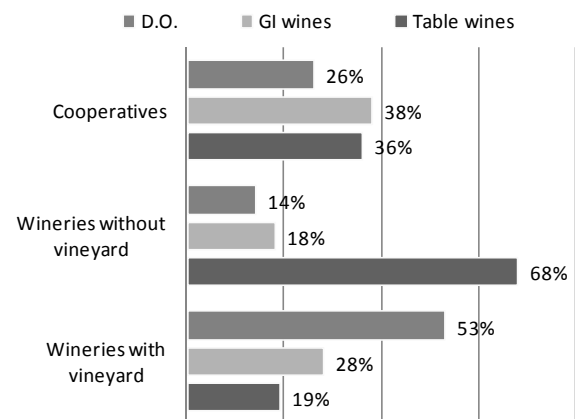
As for the quantity of wine produced, almost 94% of agricultural wineries do not rise above 500 hectolitres in 2006. About 28% of industrial wineries produce within the range 500-5.000 hl, whereas it is noteworthy that more than 17% of the wineries overcome 5.000 hl. More than 60% of the cooperatives lie in this latter production class (Fig.1).

**Fig. 1 – Wineries' size and typology**



As shown by Fig.2, agricultural wineries are mainly oriented to Appellation of Origin wines (53%), whereas the industrial wineries are mainly concentrated on Table wine production (68%) and only 14% of their total production is given by AO wines. Cooperatives show a less specialized production, or in other words a more homogeneous distribution of their product range among the different types of wine; this could be justified by the heterogeneity of upstream associated vine growers.

**Fig. 2 – Vertical relationship and quality**



Finally, we can resume the characteristics of three groups of wineries. Let us now resume the main traits of each group.

**Agricultural wineries:** low quantity but high quality wine production. The compliance with well-defined upstream production conditions (*cahiers de charges*) constrains the wineries in terms of their strategic flexibility in their quantity choice. These wineries thus face additional productions costs, in exchange of an increased collective reputation, which may favour them on the final market (see the results concerning the willingness to pay for the DO attribute). Nevertheless, these wineries may face difficulties in the promotion and valorisation of their product on the final market and capturing market share in new markets.

**Industrial wineries:** medium-high quantity and orientation to table wines production. Less constrained in terms of upstream production conditions, these wineries maintain their strategic flexibility in the quantity choice. The relevant volumes of

commercialized quantity allow these wineries to develop scale economies in both production and promotion. These factors may thus facilitate the development of own brands' strategy on the final market. Nevertheless, the increasing attention put on food safety and quality raises the issue of quality control of the inputs and, more in general, the governance of the relationships between upstream suppliers (Giraud-Héraud, *et al.*, 2008). As detailed above, the trend towards an increase of the grape processed by industrial wineries reveal the potential important role of the inputs transacted on the intermediary spot market and thus the necessity to implement mechanisms of input quality control.

**Cooperatives:** high quantity and heterogeneous supply. This type of winery is characterized by high scale economies both at the production and commercialization stages and a heterogeneous supply.

## VI. DISCUSSION AND CONCLUSIONS

The choice experiment confirms the results of other studies, carried out mainly abroad: the most relevant attributes for consumer choices are the firm reputation (represented by the producer's brand), the region of origin, the appellation of origin and objective information, like grapes variety.

The interest in the kind of grapes and the preference for a locally known producer can be interpreted in various ways. Jointly considered, they might show attention to wine origin, production techniques, and *terroir*. The opinions expressed during the interviews suggest that this concern might come either from a cultural-hedonistic curiosity towards wine, or from worries regarding food safety. The preference for locally known producers is certainly related with the widespread habit of buying wine directly at the wineries (37% of respondents), which implies trust towards a supplier. Trust is also crucial when facing food safety scares.

Information about the grapes variety can also be seen as the most accessible signal to infer wine taste. Back label information is facultative, hard to read and possibly hard to understand for non-expert consumers. Moreover, attention to grapes variety grows as age diminishes and could represent an upcoming trend.

The function of the appellation of origin overlaps to the function of grapes variety and brand: appellation guarantees wine quality, determines the grapes variety, suggests organoleptic quality and is obviously connected to the *terroir*. However appellation often is estimated to be less relevant than brand and grapes variety, possibly because it is less accessible. In fact interaction effects show that the appellation of origin acquires higher weight when it is associated to a certain degree of product knowledge and, amongst habitual drinkers, to greater experience.

Results from this research strongly differ from previous works because of the low importance attributed to price, which had often been identified as one of the main quality signals. Many reasons could lead to this divergence: wine diffusion and knowledge in Italy are larger than in Anglo-Saxon countries, so that Italian consumers could be able to use other attributes to infer quality, with no need to rely on price; moreover the decision to concentrate, in this study, on ordinary consumption, excluding special occasions, could have limited the importance of selecting a quality product.

The curve of utility as a function of price had already been found to be parabolic in a couple of choice experiments, carried out abroad, but no evidence had so long been found for Italy.

Coefficients show that private labels are not appreciated in the wine Italian market, unlike in other countries. Maybe in Italy wine is too strongly related to tradition and to a local dimension and is not considered a major food retailer product; it could also be that Italian wine market is still not ready for this kind of branding, or that wine private labels currently lack effective promotion and information.

Let us now turn to highlight the main results of the demand analysis, which have been used to trace some observations about the way Italian wineries are nowadays equipped (both towards the downstream and the upstream markets) to respond to consumers demand for quality, and namely the increasing consumer concerns about quality and safety and to the changes in the retailing sector, namely the increasing role of supermarkets.

The demand analysis has highlighted that consumers are interested in a *wide concept of quality*, from the production conditions to the quality of the

processing and commercialization stages, including some *credence attributes*, which consumers cannot experience even after consumption (such as the food safety attributes, the environmental protection, the issue of animal welfare, the labour conditions, etc.). The typologies of vertical relationships along the supply chain, the modes of procurement, the distribution of information among agents affect the quality of the final product. Given that both grape production conditions and the quality of the processing stage have a considerable influence on the quality of the final product, the typology of vertical relationships between vine growers and the downstream processing stage affects the quality of the processed product. Whereas vertical integration seems to facilitate a quality control from the upstream production conditions to the quality of the processed product, an increasing fraction of the total wine produced goes through consecutive stages before getting to the intermediary market of bulk wine (or to the final market). The higher is the volume of wine processed by industrial wineries (rather than by agricultural ones), the higher becomes the potential role of the grape transactions. Given the raising exigencies of quality control along the whole supply chain and the necessity for firms to minimize the market risks in the long term (loss of market shares, loss of reputation, exposure to liability in the case of product failure), contractual agreements between industrial wineries and wine growers (rather than spot transactions on the intermediary market) could be envisaged as an effective solution to the problem of quality control of upstream production conditions and quality of the inputs.

As highlighted by the demand analysis, supermarkets and stores play an increasing role in the commercialisation of wine on the final market. The consequent necessity for wineries to interact with downstream operators with a high bargaining power raises the question whether the winery is sufficiently competitive to access to these channels. Access to the downstream final market could be achieved either through a cost advantage and/or through a high quality (or niche) product. Not surprisingly, the analysis of the size of wineries has pointed out that industrial wineries and cooperatives are more likely than agricultural wineries to compete on a cost basis. The

plant size of both industrial wineries and cooperative facilitate the achievement of scale economies and a higher bargaining power towards retailing operators. The size of plant also facilitates long-term quality investments concerning the processing stage and the implementation of quality control procedures towards upstream producers. On the other hand, agricultural wineries are more quality – oriented and may thus compete on a quality basis.

As highlighted in the previous point, on the one hand some conditions affect the possibility for firms to reach the final market with their own brands (limited size, limited scale economies both in quality investments and promotion, etc.). On the other hand, some factors may provide incentives for firm to develop a brand strategy; namely, consumer appreciation of quality signals. As highlighted by the demand analysis, both the notoriety of the industrial brand and the designation of origin constitute important quality signals for consumers in assessing the quality level at the moment of purchase. The higher is the importance assigned to these objective attributes from consumers, the higher should be the incentive for processing firm to bottle the wine and commercialize it to the final market through a brand and/or a designation of origin. The trade-off of the wineries between selling the processed product to the intermediary market or vertically downstream integrate through a process of brand creation thus depends on the appreciation of these quality signals by consumers. Nevertheless, the considerable volume of processed product that goes through downstream stages before getting to the final market (sales from the wineries to the downstream operators that only bottle processed wine), especially for the cooperatives (Pomarici and Boccia, 2006), shows that the appreciation of individual and collective brands by consumers is not sufficient for wineries to be interested in a process of brand creation. Namely, even when the size of the winery could allow financing a process of brand creation, the promotional effort is not always effective. This point is confirmed by the low consumer reaction to promotion of both individual and collective brands. Hence, the main factor influencing consumers to buy a certain wine for the first time is the suggestion of friends, rather than the influence of communication strategies of the firms.

The demand analysis has also highlighted a relatively low appreciation of the private label by wine consumers. To the extent that consumers do not (or slightly) appreciate private label, the horizontal competition between private label and industrial brands on the final market is limited. This could enhance the bargaining power of wineries towards the large stores and thus provide incentives for wineries to commercialize their own brands. However, if the concept of private label is extended to “premium private label” (as *Filière Qualité Carrefour*) and is thus based on quality control procedures and product differentiation, the horizontal competition between wineries and retailers could be enhanced.

## VII. FUTURE LINES OF RESEARCH

The consumers’ survey is remarkably general: no constraints about wine type, origin or colour were imposed; its main limits are the geographical coverage and, for the choice experiment, the context of the simulated choice.

Concerning the supply side, one of the most relevant results of our analysis is the increasing role of industrial wineries in wine production and thus the potential increasing role played by the transactions on the intermediary market of grape. The difficulties in establishing contractual relationships, in the long term, imply price volatility on this market, which menaces the long term quality investments. The quality of the final product resulting from the quality of raw material and from the upstream production conditions, the analysis of the procurement strategies of downstream firms towards upstream producers could constitute an interesting extension of our analysis. Moreover, the nature and limits of the data has not allowed analyzing the link between the firms’ strategy on the final market and the typology of vertical relationships with upstream vine growing stage, thus the interaction between upstream and downstream strategies. This further extension could allow understanding how the procurement strategy affects the strategies for the development of brands on the final market.

## REFERENCES

Al-Sulaiti, K. I., Baker, M. J. (1998) Country of origin effects: a literature review, *Marketing Intelligence and Planning*, vol. 16, n. 3, pp. 150-199.

Angulo, A.M., Gil, J.M., Gracia, A. and Sanchez, M. (2000), Hedonic Prices for Spanish Red Quality Wine, *British Food Journal*, vol. 2 (7), pp. 481-493.

Bazoche, P., Giraud-Héraud, E., Grazia, C. (2006). "Evoluzione dei consumi: tendenze e approcci di analisi", in *Il mercato del vino. Tendenze strutturali e strategie dei concorrenti*, a cura di Cesaretti G., Green, R., Mariani, A., Pomarici, E. Franco Angeli, pp.337-361.

Benfratello, L., Piacenza, M. Sacchetto, S. (2004). What Drives Market Prices in the Wine Industry? Estimation of a Hedonic Model for Italian Premium Wines. *Ceris-CNR Working Paper* n.11.

Bernabéu, R., Tendero, A., Olmeda, M., Castillo, S. (2001) Actitud del consumidor de vino con Denominacion de Origen en la provincia de Albacete, IV Congreso Nacional de Economía Agraria, Pamplona, Settembre 2001.

Bilkey, W. J., Nes, E. (1982). Country-of- Origin Effects on Product Evaluations, *Journal of International Business Studies*, vol. 13, pp. 89-99.

Combris, P., Lecocq, S. and Visser, M. (1997). Estimation of a Hedonic Price Equation for Bordeaux Wine: Does Quality Matter? *Economic Journal*, Vol. 107, pp. 390-402.

Goldsmith R.E., D’Hauteville F., (1998). Heavy Consumption: Empirical and theoretical perspectives. *British Food Journal*, Vol. 100/4, 184-190.

Hertzberg, A. (2009). Wine Demand in Italy. An analysis of consumer preferences, *New Medit*, 1, *Forthcoming*.

Jarvis, W., Rungie, C., Lockshin, L. (2003). Analysing wine behavioural loyalty. *International Wine Marketing Colloquium*, Adelaide.

Landon, S., Smith, C.E. (1997). The use of quality and reputation indicators by consumers: the case of Bordeaux wine. *Journal of Consumer Policy*, vol. 20, pp. 289-323.

Lecocq, S., and Visser, M. (2006). What Determines Wine Prices: Objective vs. Sensory Characteristics. *Journal of Wine Economics*, 1 (1), pp. 42-56.

Lockshin, L. S., Spawton, A. L., Macintosh, G. (1997), Using Product, Brand, and Purchasing Involvement for Retail Segmentation. *Journal of Retailing and Consumer Services*, Vol. 4 (3), 171-183.

Louviere J. J., Hensher D. A., Swait J. (2000). Stated choice methods. Analysis and application. Cambridge University Press.

Louviere J., Woodworth G. (1983). Design and Analysis of Simulated Consumer Choice Allocation Experiments: an Approach Based on Aggregate data. *Journal of Marketing Research*, Vol. 20, 350-367.

Malorgio, G., Camanzi, L., Grazia, C. (2008), “Geographical Indications and International Trade: evidence from the wine market”, *Forthcoming* in *New Medit*, n°4.

McFadden, D. (1974). Conditional Logit Analysis of Qualitative Choice Behavior. In *Frontiers of Econometrics*, a cura di P. Zarembka, New York, NY, Academic Press

Mitchell, V.W., Greatorex, M. (1989) Risk reducing strategies used in the purchase of wine in the UK, *European Journal of Marketing*, vol. 23 (9), pp. 31-46.

Mittal, B. and Lee, M.S. (1989). A causal model of consumer involvement. *Journal of Economic Psychology*, 10, 363–389.

Mtimet, N., Albisu, L.M. (2006). Spanish Wine Consumer Behavior: A Choice Experiment Approach. *Agribusiness*, 22(3): 343-362.

Oczkowski, E. (2001). Hedonic wine price function and measurement error. *The Economic Record*, vol. 77 (239), pp. 374-382.

Pomarici, E., Boccia, F (2006). La filiera del vino in Italia: struttura e competitività. In *Il Mercato del Vino: Tendenze strutturali e strategie dei concorrenti*, a cura di Cesaretti G., Green, R., Mariani, A., Pomarici, E.. Franco Angeli, pp. 142 – 189.

Skuras, D., Vakrou, A. (2002) Consumer's willingness to pay for origin labeled wine: A Greek case study, *British Food Journal*, vol. 104 (11), pp. 898-912.