

Explaining price dispersion in the Campania market for wine

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Introduction

Wine is a leading product in the Italian agro-food sector. Inside the unfavourable Italian agro-food balance of trade, wine is one of few items for those the export is largely greater than the import. Besides this commercial success, wine is particularly important for the entire economy, influencing revenues and occupation in many linked sector, from the winery machine suppliers to the tourist and restoration operators. Moreover it contributes to the made in Italy quality image and to the environmental preservation in many regions with a high risk in soil erosion and socio-economic degradation.

After the crisis of the seventies, at the beginning of the eighties the Italian wine producers found the right strategies to reply to the changing international trade scenario. While most part of Italian wine is actually able to defend its competitive position as regards old and new competitors, there still are many producers confined to the margins of the market. The chief delay emerges for the southern regions that did not adequately invest in quality improvement during the seventies and the eighties. The paper analyses some aspects of the competitiveness of wine sector in Campania, one of the largest region in Southern Italy. It focuses on price analysis, especially for those aspects related to the firm's different marketing strategies.

The paper is divided into three parts.

Section one presents a brief description of the main structural and strategic problems of Campania production.

Section two summarises some important findings on the role of price in wine market strategies, stemming from the available literature

Section three presents the results from an econometric analysis on wine price variability in Campania, based on data originally collected by a field survey.

Finally, concluding comments suggest some scenarios for the Campania wines, referring both to the previous results and the actual trend in world market strategies.

New trends in the world market and the competitiveness of Campania wines

Wine world market has recently been characterised by the following trends on the demand and supply sides.

In the most of the traditional markets (especially France and Italy), consumption continues to dramatically drop, while the demand is growing in the new consumers regions, like Japan, East Europe and China. Compared with data on quantity, data on values show a most favourable dynamic, accounting for the switching from the low to the top segments of the demand.

On the supply side recent trends confirm the rising role of the new strong producers (California, Chile, New Zealand) in guiding the repositioning strategies of the traditional producers (especially France, Italy, Spain and Germany). These strategies are largely based on three aims. The first is to modernise the techniques and the structures to reach the technical efficiency of new competitors. The second is to deeper differentiate own production both on vertical and on horizontal dimension. The third is to improve the sale and distribution policies.

In the nineties the outstanding tendency, that is still shaping the world wine market, was the taste internationalisation. Actually both consumers and producers accept some basic criteria to judge the wine quality. Leaving out its specific characteristics, due to the vine variety or to the year and the origin of production, a wine will be considered of higher quality if the taste will be conformed to the following attributes: freshness, taste pleasantness and softness, fruit flavour, fashionable wood aromas. These quality attributes emerged from the preferences revealed by the most commercial attractive consumers (like young people, women and people purchasing wine for the first time) and were recognised both from the experts and the producers as the most useful quality parameters. What happened in the last years was the affirmation (achievement) of an implicit international minimum quality standard, complying with which seemed to be convenient for all the economic operators in the sector. The main reason for this convenience could have been the facilities in communication strategies and the simpler face to face competition between wines with different origin.

Southern Italian wines are not so famous and appreciated like the Central and Northern Italian ones. In the past, when the main destination of the production were the local markets and the low-income consumers, non bottled table wines prevailed in the Southern regions. In Campania by pursuing low prices instead of quality, vine growers progressively wasted the historical richness the region had in local vine variety and eno-gastronomic tradition. In the seventies and eighties the reduction in consumption and the European community imposition of lowering the production led many farmers to crisis. The consequent inability to make new investments aggravated the pre-existent structural and technological weakness of the region.

Things became to change at the end of the eighties. The renovated consumer's interest for typical products and the diffusion of a new quality wine culture led the most dynamic managerial forces in the sector to accomplish new investment and marketing strategies. Economic success achieved by

the major incumbent firms and the international favourable conjuncture attracted new entrants, making the wine sector one of the most active in Campania agriculture. At the end of the nineties Campania producers were present at the main national and international wine exhibition and the names of the best Campania wines were known in the most exclusive club of consumers.

At present in Campania vineyards cover more than 41.600 ha, 70 % of which are the hills, and the annual wine production is about 2.000.000 hectolitres. There is one wine (Taurasi) with controlled and guaranteed geographic denomination (docg) and 21 wines with controlled denomination (doc). There still are in the region 8 wines from autochthonous vines: Aglianico, Fiano, Greco, Falanghina, Asprinio, Biancolella, Per'e palummo, Forastera. These wines possess very peculiar flavour and taste that can be exploited by appropriate differentiation and promotion strategies.

The new millennium challenge for the Campania wine sector is the completion of the structure and technical modernising process started in the eighties and the reinforcement of the positioning on the international market. The two main goals must be the improvement of quality in the lowest segments of the market and the increase of the exports. To reach these goals a big effort is requested in the area of production so as in that of promotion and of sale and distribution.

The price-quality ratio in the wine market

Analysing the relationship between price and quality in the wine market is a very tricky problem, because of at least three basic issues.

First of all, wine price exhibits a great variability, also inside a very similar group of products. For the same wine, just changing the year of production or the length and the way of ageing we can observe prices considerably changing. Wine can be classified as a non-convenience good, highly differentiated and affected by many non-economic factors influencing price, like fashion, social atmosphere and individual psychological attitudes.

Secondly, quality and consequently its effects on price, can be hardly defined. Wine is a search more than an experience good. Especially for the high quality wines, consumers try to ascertain qualitative characteristics prior to purchase, looking for more information as price, and consequently the cost of making a disappointing purchase, rises. The availability of correct and credible information will increase the consumer's willingness to pay, and so the price. Problems rise because of the particular way information are supplied in the market. The role of producer's advertising is very small compared with that of specialised media and the experts. Because of the non-verifiability of many quality attributes and the subjectivity of the judgement of the experts, there are serious problems of imperfect information and opportunism, and this can twist the quality-price relationship.

In third place price can be used as a signal of quality. When consumers are protected against opportunistic behaviour by implicit contracts like reputation, this will not reduce their welfare, and the premium price will represent the cost of information and guarantees. Unfortunately, in the wine market the lack of information and the difficulty of developing a credible producer reputation leave space for unfair practices like fixing prices greatly exceeding the real quality value. Therefore the use of price as signal of quality can lead to loss in welfare and in competition.

The empirical studies analysing the quality-price relationship (Oczkowsky, 1994; Nerlove, 1995; Steiner, 1999) give rise to various and sometimes contradictory results. Generally the question is addressed by distinguishing objective quality from perceived quality. The first refers to physical characteristics embodied in the product, and that are in some way measurable and verifiable. The second refer to material and immaterial attributes added to the basic product mainly by distribution and promotional activity.

Studies demonstrate that price depend on objective quality, measured by indicators like alcoholic degree, acidity, the aroma and so on, so as on perceived quality. The latter is indirectly measured by indicators like the distribution channel, the kind of packaging, the promotional effort and so on. Important roles are also played by formal and informal assurance and guarantees contracts, like label, geographic denomination, certification and reputation.

The current competitive scenario can affect the price-quality ratio problem in two different ways. On one hand the enter of new competitors and the further market globalisation should improve competition and drive producers to fair strategies. Especially in the middle and lowest segments of the demand we must expect an increasing use of competitive strategy variables like pricing and the improvement of sales and distribution, that should lead to a more transparent and fair market. In this way price should tend to mainly depend on objective quality.

On the other hand new needs expressed by consumers and the preference for exclusive wines lead to strongly use the lever of differentiation and promotion. In this case prices could tend to depend more on perceived quality and it could be increasing opportunities for unfair behaviours. The diffusion of the international taste previous defined could be interpreted as an implicit institution able to prevent opportunism, acting like an informal minimum quality standard.

The price-quality relationship: a field analysis

The sample

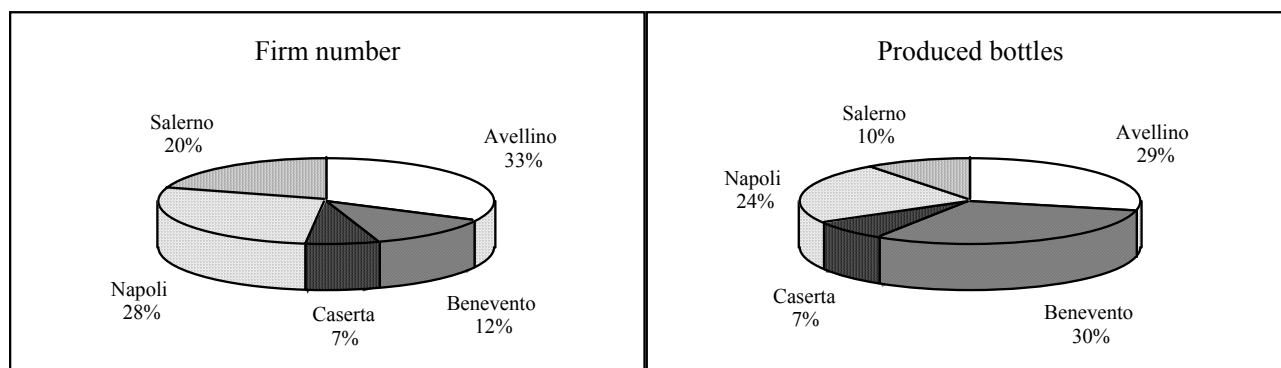
In order to test the price-quality relationship in the Campania wine market a field survey on 61 wine producers was carried out. The sample was selected from those firms who in 1999 took part to the Vinitaly exhibition. Then, the starting point of our survey represents a specific sub-sample of Campania firms; as a matter of fact it refers to situations already showing some dynamic behaviour in market relationship. Nevertheless, inside the sample many differences can be found, both in production characteristics and in firm strategies.

A three sections questionnaire was submitted to the sample units. The first section aimed at collecting information on structural characteristics of the firm and on some production items, relating, in particular, on grape origin and on quality control carried out by the firm. A second section of the questionnaire referred to each single wine produced by the firm: for each wine data were collected relating to selling price, produced quantities and those bottle and label characteristics that firm can use as quality signal. Finally, in the third section some aspects as geographic destination of product, market channels and firm promotion policies were investigated.

The first aspect to be investigated concerns the grape provision. Twenty-five wine producers (41% of the sample) work their own farm grapes, the same number buys part of the raw material on the market; while eleven firms get all the grape on the market, in most cases DOC grape. Firms integrate their grape production when they want to increase the wine produced but it is very difficult to rent or buy more land and vineyard; in some case market provision is justified by the willingness to enlarge the number of supplied wines (this happens in 5 out of 25 firms). Generally speaking, there is a strong relationship between production phase control and business form: all transforming firms, except one, are companies, and so are two thirds of firms buying on the market part of the grapes; individual firms and co-operatives exclusively work their own farm grapes. In any case, raw material comes mainly from the province, at the most, the region.

The production situation of the sample is very differentiated in relation to localisation (graph 1). Comparison of firms number and of produced bottles shares for different provinces shows a very large difference in the structural characteristics of production in different areas. In particular, it should be noted the larger average dimension of firms in Benevento province: they represent only 12% of the sample in number term, but they account for 30% of the production. The opposite is true for Salerno province, where 10 out of 12 firms produce less than 10,000 bottles.

Graph 1: Share for provinces of sample firms number and produced bottles



Firm dimension is strongly related to the wideness of wine numbers: firms with a larger production apply a horizontal differentiation policy, usually linked to a price differentiation policy. It should be specified, though, that supply of a large wines variety is an even more spread marketing strategy, so much that 75% of interviewed firms produce at least 5 wine types and one third of the sample supplies more than 8 different wines. Differentiation strategy is applied also supplying different denomination wines: in almost all firms, besides DOC wines (and DOCG wines in area of Taurasi production), also IGT and table wines are bottled. Horizontal differentiation based on wine typologies number is especially applied by co-operatives and company firms.

Very important is the relationship between wines number and firm experience. More than 58% of younger firms, those coming into the market not more than 5 years ago, produces at most 4 different wine typologies; the 71% of firms that started their activity between 5 and 10 years ago produce from 5 to 8 wine types; wider is the supply of firms in the market since more than one decade.

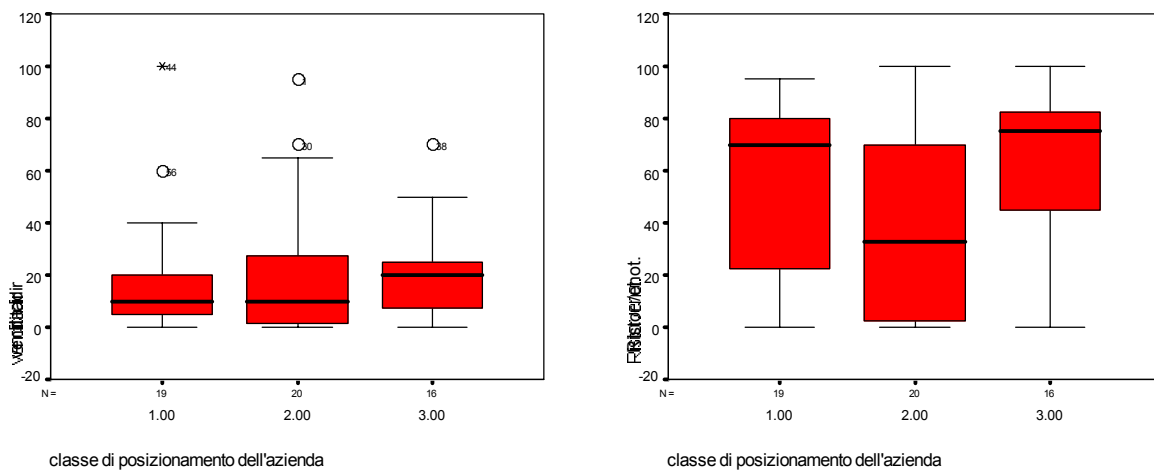
Price policies related to wines number are not homogeneous. To analyse this aspect, an index of relative firm positioning has been built, that could point out in a synthetic way whether the firm is positioned, as price of its production is concerned, around, under or above the sample average. This index has been calculated as weighted average of ratios between firm price for each wine and the sample average price for the same wine category, using as weight the share of each wine on total firm production.

Analysing the relationship between this index and the number of wine typologies it can be pointed out that firms producing few wines have average or above the average prices, while a big share of firms applying a more evident horizontal differentiation is positioned under the average price. This aspect should be further on investigated, as it can hide different strategies linked, in particular, to firm dimension. A high price positioning can be related both to situations in which a small firm carries out a quality strategy based on a niche market, and a more attacking strategy of a big firm

pointing to high value wine market. On the other side, a low price positioning can be referred to strong firms aiming at an average standard and applying a low price strategy or, on the contrary, to more marginal and traditional firms.

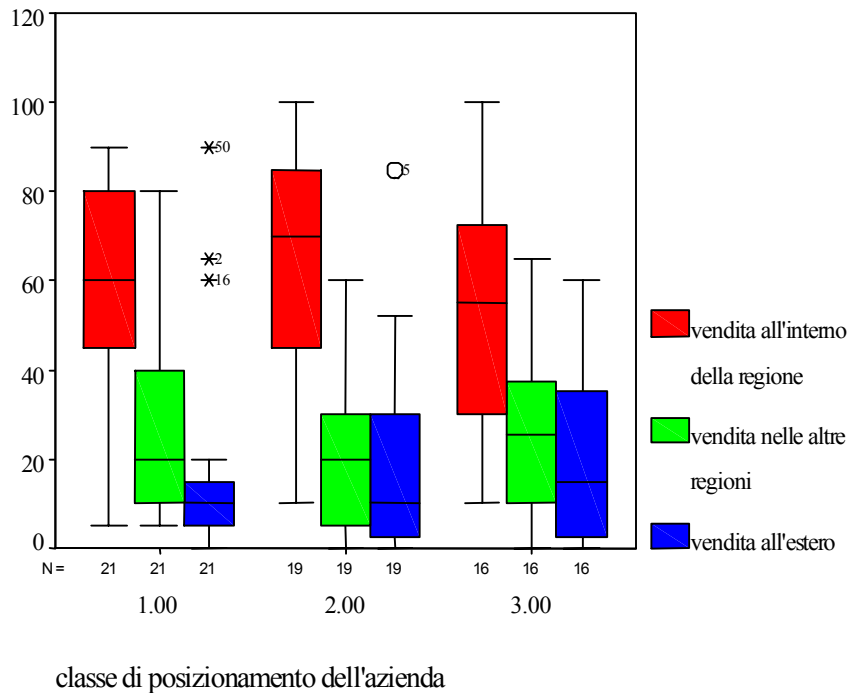
Another aspect analysed in the survey refers to marketing channels. In graph 2 the share of production sold directly to final consumer and to restaurant and wine specialised store is related to the relative price positioning of the firm. As direct selling is concerned, firms at different price positioning show in the average the same behaviour; nevertheless, the difference in the median value points out that firms with an above average price policy are in percent more oriented to direct selling. As restaurant and wine store channel is concerned, it can be noted a larger variability for the three price typologies.

Graph 2: Share of production sold directly to final consumers and to restaurant and wine specialised stores in relation to price positioning class



Geographical destination of production is mainly represented by local and regional market. In average 20% of production is placed in the international market. Graph 3 show the small export orientation of firms in the low price band and a smaller relevance of regional destination for the high price positioned firms.

Graph 3: Share of production for geographical destination and for price positioning class



To get a deeper idea of the sample characteristics, a cluster analysis was carried out aiming at identifying groups of firms homogeneous in some elements investigated in the questionnaire. The variables used in this analysis were:

- vineyard hectares;
- total production;
- number of produced wines;
- percentage of grape bought on the market;
- percentage of not bottled wine;
- percentage of wine sold in the international market;
- percentage of wine sold to restaurant and specialised wine stores;
- age of firm owner;
- number of activity years;
- price position index.

This last one was calculated as weighted average of ratios between the firm selling price and the average price for each wine category, using as weight the share of production of each wine on total firm production. This index was built in order to point out in a synthetic way whether the firm, as

price is concerned, is positioned around, under or upon the average of the sample for its production as a whole.

In the cluster analysis 5 groups were identified.

The first one includes 17 firms showing traditional vine-grower characteristics: they are family firms whose owner are older than those in other groups, they transform exclusively or partially own farm grapes, with medium-low production level and a limited variety of wine types. These firms apply a diversification strategy of market channels and sell both directly to final consumer, to intermediates and to restaurants and wine stores. The wine is sold to regional market and is positioned at a medium-high level of price.

The same price policy is applied by 15 firms included in the second cluster that differ from the previous ones because of medium-big dimension and company form. As a matter of fact, eleven of them are societies and one is a co-operative. In this group direct selling represents a very low share of production while more relevant is the sale both to middlemen and restaurant and wine stores. Wine choice is richer than in previous firms and marketing strategy is based on different communication forms, among them tasting and advertising. As product destination is concerned, a relevant share of production is sold on international market.

The third cluster is formed by 19 small and medium dimension firms, standing on low average prices. The characterising aspect of this group is the market channel: restaurants and wine stores are the more relevant buyers and product is especially sold in the regional market. Other elements by which this group can be distinguished are the very important weight of not bottle wine sale (in average 20%) and, as firm owner is concerned, the younger age. This cluster seems to give importance to some quality signalling as label, more than to objective quality elements, like selected ferments that, as a matter of fact, are not used in 15 on 19 firms.

Last two groups are very small. The fourth cluster includes 3 big co-operatives localised in Benevento province; they transform only own farm grapes and are positioned on low price level. These firms point especially on horizontal differentiation policies: they produce many different wines; the production is sold in not bottled form (the biggest share), but even in a bottled form. As bottled wine is concerned, many market channel are used and the production is sold both to direct final consumer and restaurant, and to the organised distribution. The product is sold at regional and national level. Finally, last group includes 3 old traditional companies, located in Napoli province. They transform grape bought on the market and show a not homogeneous price policy. These firms apply a horizontal differentiation strategy, too, based on a very large number of wine (more than 10 types of wines) and production is sold on regional and international market.

The econometric analysis

In the empirical analysis our aim has been to deepen the relationships between price and firms strategies and to identify a model explaining price dispersion for the Southern Italian wines. In particular we considered some aspects related with quality. The analysed model is expressed by the following equation:

$$P_i = P(Q_i, S_i, PQ_i)$$

where:

- P_i represents the price of a wine.
- Q_i is the set of attributes of objective quality.
- S_i is the set of variables regarding the characteristics of supply
- PQ_i is the set of perceived quality factors.

Our hypothesis is that the price of wine is affected by different groups of factors. On one hand, is the objective quality which contributes in defining the product under strict organoleptic, and gustative profiles, and a number of variables that influence the consumers perception of quality. On the other hand, there are other variables which strictly define the characteristics of supply, but these characteristics cannot be used by the consumer to determine the quality of the product. To be more precise, the three factors are:

Objective quality factors: These are represented by the set of wine qualitative attributes, both objective and measurable. It is hypothesised that consumers have the same preferential scale regarding these quality attributes. The two principle characteristics which have been collected during the research are: alcoholic content, and acidity level. Beyond these two parameters a series of indicators have been found which could have a strict relation with the previously mentioned attributes of the wine. Some examples are; the type of yeast selected for the fermentation of the grapes, the control of the temperature, chemical, and physical controls to test the quality of the grapes, and to monitor the process of wine-making, the materials adopted during the process of wine-making, the mellowing and maturing of the wine, and finally the presence in the firm of a qualified oenologist able to manage and optimise the technical aspects of the production. A final variable which one can add to the list is the trade mark. Also denomination of origin represents a factor able to modify the level of quality perceived by the consumer. Denominations of origin shouldn't be considered among the variables of objective quality however, their use implies the application of a precise, and strict production, which when followed modifies the quality of the final product.

Factors regarding the characteristics of supply: In this case there are two fundamental variables, the first regards production dimension, and the second regards factors directly linked to firm characteristics. Collected data concerning production dimension are referred to the number of bottles produced for each type of wine, to the gallons produced by the firm, and to the size of the cellar. This is done as it is believed that larger firms can offer the wine they produce at more competitive prices. Regarding other winery characteristics, in an attempt to gather the impact of different degrees of experience, and the role of different manager profiles, style, and the age of the company have been taken in consideration.

Factors of perceived quality : In this section, there are a number of variables represented by extrinsic factors. Such attributes alone do not constitute objective quality factors, but can be used by the consumer to infer a major, or minor quality level. However the presence of these extrinsic factors is determined by precise business decisions, such as the use of (or in some cases exclusion of) double labelling, the information to be used on it, the type of lid used to close the bottle, advertising strategies, its appearance on specialised guides, and the period of time it has appeared on them.

The model has been tested on a data set represented by 437 observations relative to an equal amount of wines present in the production of 61 wineries of the Campania region. Using these observations a linear multiple regression analysis has been carried out. Among the experimented models, the following equation seems to be the most fitting:

$$P = \alpha + \beta_1 \text{ alcohol} + \beta_2 \text{ double label} + \beta_3 \text{ coop} + \beta_4 \text{ Docg} + \beta_5 \text{ fantasy} + \beta_6 \text{ age of firm.} + \varepsilon$$

The following table contains the results of the regression:

Estimated coefficients

Variables	Coefficient	t-Statistics	Prob.
C	-15582,93	-8,919795	0,0000
Alcohol	1817,364	12,00913	0,0000
Double label	1041,396	2,834626	0,0048
Coop.	-1709,109	-5,230902	0,0000
Docg	10152,30	14,12680	0,0000
Fantasy	4884,650	8,997357	0,0000
Age of co.	-7,9602	-2,4433333	0,0150
R ² corrected	0,614487		

As one can observe, on the whole the variability shown on the model is equal to 61,4%. The R^2 corrected even though not particularly elevated, is amply acceptable even considering the cross-section nature of the data set. The six variables are associated in high levels of significance. The sign of the coefficients associated with each indicator are consistent to working hypothesis¹. The proposed model picks out two variables for each of the three previously analysed groups of factors. The factors of objective quality are represented by the alcoholic content and the presence of a controlled, and guaranteed denomination of origin. In both cases, the coefficient signs attest the existence of a positive relation with the price.

Among the variables referring to the characteristics of supply, two of the six regressors are found. The model shows a negative relation between price, and wines produced by firms which are run in a cooperative manner (coop): It is a traditional type of company with a weak opening in the market, and characterised by a less incisive strategy of sales.

The analysis has demonstrated a negative relation between price, and the age of a firm. It can therefore be confirmed that the younger companies are also the most aggressive, and better orientated in the market; they manage with greater efficiency to condition the selling price.

Regarding the factors of perceived quality, the empirical model individuates the variable referred to by the presence of a double label and the relative one referred to by the use of an original name for the wine (fantasy). In both cases the coefficient, as one would expect, is positive. The double label' used to the consumer is a sign which demonstrates on behalf of the producer to value their product, adding extra information referred to the type of vine, the organoleptic characteristics, and to the best food accompaniments.

Regarding the choice of name for the wine (fantasy), we refer to the wines whose name does not refer to any kind of institutional protection, the type of grape used, or the place of production. It's a matter of a precise business choice with which the wine can be given a certain personality and type of exclusiveness increasing the appeal to the consumer, and the symbolic value of the product.

Concluding remarks

The results of our study demonstrate that in the wine market consumers are even more attracted from quality, while the interest for quantity and low prices is declining, also in regional traditional market like that of Campania.

¹The regression has been subjected to White's test, which offers an F statistic to value an eventual error in the specification of the model. The test results, oblige us to refuse the null hypothesis, however it must be noted that the presence of heteroschedastic residues was amply awaited, and affected from the ample variability of Y.

For consumers quality has multiple dimension. Primarily, they recognise a premium price for quality characteristics that are verifiable and strictly dependent on the intrinsic constitution of the product, like the alcoholic degree. Second, they want to pay more when quality is recognised and guaranteed by some public institution, like origin denomination. Third, they give value to information they can easily acquire before purchase and that rise their perceived quality, like the information on the double label. Finally, they are willing to pay higher prices for new and exclusive products, like the fantasy wine in the model, and this accounts for the horizontal dimension of quality.

To achieve the best opportunities, firms must renovate and improve management. Co-operatives, that in Italian food sector are characterised by a low competitiveness due to the lack of suitable management incentives, seems specialised in the low and less competitive segment of the demand. On the other hand, young individual firms, conducted by able management, are very successful in the higher and most dynamic segments.

These general findings get light on the current competitive situation in the wine sector in Campania and help to sketch some possible future scenarios.

Referring to the international market Campania is a very little producer and is oriented to the low and medium segments. In these segments many big firms from the most modern region of production operate and the key success factors are the efficiency of distribution and a high quality-price ratio. Conversely, Campania distinguish itself by an extreme weakness in production structure and in the channel of distribution.. In the region there still are many firms with one or few hectares and in many cases the wine-making phases are externalised and performed with obsolete machinery, with a consequent loss in quality control and efficiency. The distribution is heavily based on the activity of middlemen supplying very little services and contacts but receiving big margin. That's why until now Campania wines had a quite exclusive local distribution, often limited to the southern and central Italy, and many farmers use to complain about low prices and revenues.

During the last decade, trying to overcome these obstacles the most clever farmers made a big effort in new productive and organisational investment, looking for direct contacts with the market, especially off of the boundaries of the region. Nevertheless, these efforts were not sufficient to considerably increase the export that still are a little quota of total selling.

Referring to the new consumption patterns, and especially to the consumer's inclination towards variety, Campania has some important opportunities. Even if in the region there are not top wine able to compete with the most famous French and central and northern Italy wines, there are many

unique and old products that could be utilised to implement differentiating strategies (Moretti, 1993; Pomarici, 1998).

To bet on typical and original wines to successfully enter in the international market could be a good chance, but is also a tortuous way with many traps. Particularly firms must pay attention to two important issues.

The first problem is the contradictory trend in consumption attitudes. On one hand consumers are attracted by new products, but on the other hand the increasing globalisation of the market drive towards a standardisation of the taste. To cope with this contradiction firms must find the right equilibrium between the specific attributes of a wine and its coherence with the affirming international taste we previous described.

The second problem refers to the difficulty of signalling quality in the case of typical local products. For these products the quality judgement is established up a bundle of cultural and social norms that often take the form of convention. Out of a specific customary boundary, these norms lose their value and the seller needs new ways to communicate and assure quality.

These considerations keep on highlighting the importance of the marketing management expertise for Campania firms. It is important to focus on those levers of marketing mix that are more effective with respect to the firm's and customer's specificity. Since wine is a search so as a credence good, information has an important role in guiding prices and strategies. The lack of information poses a problem of consumer search cost and trust. Firms could face information problems analysing customer's relationship in all its aspects, considering trust and commitment, as well as satisfaction, and choosing the most effective promotional and distribution strategies.

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