Research report

# Generation Y, wine and alcohol. A semantic differential approach to consumption analysis in Tuscany

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A B S T R A C T

The aim of the study is the elicitation of the consumer's semantic perception of different alcoholic beverages in order to provide information for the definition of communication strategies for both the private sector (and specifically the wine industry) and the public decision maker. Such information can be seen as the basis of a wider social marketing construct aimed at the promotion of responsible drinking among young consumers. The semantic differential approach was used in this study. The data collection was based on a survey to 430 consumers between 18 and 35 years old in Tuscany, Italy. The database was organized in a three-way structure, indexing the data in a multiway matrix. The data were processed using a Multiple Factor Analysis (MFA). Moreover, homogeneous clusters of consumers were identified using a Hierarchical Clustering on Principal Components (HCPC) approach. The results of the study highlight that beer and spirits are mainly perceived as "Young", "Social", "Euphoric", "Happy", "Appealing" and "Trendy" beverages, while wine is associated mostly with terms such as "Pleasure", "Quality" and "Comfortable". Furthermore, the cluster analysis allowed for the identification of three groups of individuals with different approaches to alcohol drinking. The results of the study supply a useful information framework for the elaboration of specific communication strategies that, based on the drinking habits of young consumers and their perception of different beverages, can use a language that is very close to the consumer typologies. Such information can be helpful for both private and public communication strategies.

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## Introduction

The studies related to social changes and new dynamics of behavioral patterns have shown, in Italy, a diachronic scenario characterized by a decrease in per capita alcohol consumption, mainly due to the reduction in the consumption of wine (Allamani, Cipriani, & Prina, 2006; Scafato et al., 2010). At the same time, in contrast to the downward curve of wine – the traditional beverage typical of Mediterranean countries – it is possible to highlight the increase in consumption of beer and spirits, driven mainly by the younger generations, a phenomenon that reflects the growing international integration of cultural models (Marchini & Pieroni, 2009; Smith & Mitry, 2007; Tur, Romaguera, & Pons, 2004).

The Italian scenario shows that young people (18–24 year-olds) express consumption patterns that stray further and further apart from the Mediterranean model, marked by moderation and the association of wine with meals; such patterns move towards a "north-western" model, characterized by the high incidence of binge drinking and high consumption of beer and spirits outside of meals (Menghini, Marinelli, & Fabbrizzi, 2011).

This particular trend in the behavior of young consumers, in relation of both what and how to drink, involves territories in which, as it is the case of the Tuscany region (Voller, Orsini, & Berti, 2010), the wine sector has always played an important socio-economic and cultural role, being in various ways associated with positive values of territorial identity and economic vitality. In a market characterized by increasing competitiveness and ever wider boundaries, it becomes necessary to inspire a positive interest in wine, a product that new consumers and especially young people lack knowledge of (Agnoli, Begalli, & Capitello, 2011; Barber, Dodd, & Ghiselli, 2008); this is particularly relevant in

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countries where the traditional characteristics of local consumption, far from current excesses, are losing appeal.

In addition, as part of the public management of the phenomenon of alcohol abuse, there is no marked discrimination between wine and the beverages that are mainly responsible for drinking abuse behaviors; thus, the wine sector often finds itself in a somewhat "uncomfortable" position in terms of competitiveness, also facing the effects of a suboptimal information management (Marinelli, 2010; Menghini & Marinelli, 2011).

Understanding purchasing attitudes for wine in relation to other alcoholic beverages becomes important for the wine industry in both the markets which still show potential for further growth, as is the case of the USA, and mature markets, as is the case of Mediterranean countries, where the consumption of wine has declined compared to other beverages.

In a society characterized by the strong role of image and message exchange, consumer preferences for wine are more and more influenced by a set of intangible attributes, and the use value of the product makes room for its symbolic value. In the collective imaginary, a sort of semantic dictionary for goods exists, and consumption becomes a "code of communication" (Fabris, 2003); in this context, the product itself becomes an element of social exchange among individuals.

The aim of this paper is to explore the semantic value of wine and other alcoholic beverages generally perceived by consumers, according to a multidimensional approach that allows for the definition of the conceptual space occupied by the products. The research was conducted in Tuscany (Italy): the region represents an intriguing ground for such a study as it is a territory with a strong wine consumption tradition. Understanding the approach of younger generations to the product in an area with these characteristics can be useful to address the persistence of traditions. Moreover, the analysis of the Tuscan case study can supply a reference for similar researches in other Italian or foreign wine regions or for comparisons with areas where wine traditions are less rooted in local history. The collection of data was carried out using a survey aimed at analyzing young consumers semantic perception of five categories of beverages: wine, beer, spirits, FABs (Flavored Alcoholic Beverages or "alcopops") and soft drinks. This allowed us to identify which semantic variables are associated with the different products and how their levels change in relation to the socio-demographic and behavioral characteristics of the consumers.

To achieve this goal, the semantic differential approach was used as an exploratory tool; such a methodology allows to detect the perceived attributes in relation to the different products and to bring out their meanings in the imagination of the consumer. The information supplied by the study provide an insight on the purchase intentions for the various product categories; such information can be used in the implementation of communication strategies that can prove to be more effective because they use terminologies and cognitive models that are closer to the consumer's perception (Bilman, Van Trijp, & Renes, 2010). This communication activity has a benefit both in the private area, in terms of regaining of competitiveness for the wine sector, and in the public one, in terms of public health protection and reduction of social costs. On the public side, the study of more effective communication tools can be very useful for the implementation of larger social marketing strategies (Kotler & Zaltman, 1971) aimed at the reduction of social costs. The effectiveness of social marketing in the field of alcohol consumption was revealed in many studies that underlined its positive impact on the increase of knowledge and the changes in attitudes and behaviors (Gordon, McDermott, Stead, & Angus, 2006; Rothschild, Mastin, & Miller, 2006; Stead, Hasting, & McDermott, 2007, 2010).

## Literature review

### Generation Y and alcohol

Many international studies have shown an increase in alcohol consumption among young people (Ahlstrom & Osterberg, 2008; Cherpitel et al., 2009), often characterized by binge drinking behavior (Kuntsche, Rehm, & Gmel, 2004), fed by the "getting drunk" culture. In this perspective, alcohol is increasingly perceived as a substance used to "escape", legal and quite cheap, which acts as a "bridge drug" to illegal drugs in contexts of young people aggregation (Degenhardt et al., 2010).[1]

Negative externalities caused by this kind of consumption lead to high social costs related to health, accident rates, crime and the labor market (Anderson & Baumberg, 2006; Collins & Lapsley, 2002; Wahl, Kriston, & Berner 2010).

In the last twenty years, numerous researches on consumption behavior of Generation Y[2] (Ebenkamp & Marciniak, 2002; Huang & Petrick, 2010; Noble, Haytko, & Phillips, 2009; Noble & Schewe, 2003) have been conducted, with particular reference to the consumption of wine (Nowak, Thach, & Olsen, 2006; Olsen, Thach, & Nowak, 2007; Ritchie, Ritchie, & Ward, 2009; Thach & Olsen, 2004; Thach & Olsen, 2006). The concern for this specific age range is linked with more and more accurate market researches based on market segmentation into generational cohorts: the studies show that consumer preferences are expressions of social behaviors that are increasingly associated with habits and lifestyles shared within the same generation (Pendergast, 2010). However, cross-national studies indicate that this generation behaves differently in different countries (Durvasula & Lysonski, 2008), and in particular in relation to the consumption of alcoholic beverages (Charters et al., 2011; De Magistris, Groot, Gracia, & Albisu, 2011; Mueller, Remaud, & Chabin, 2011). This demonstrates how the context – the political, social, economic and cultural environment of each individual country – influences attitudes and consumption patterns (Charters, 2006). As a matter of fact, Generation Y in the U.S. has a positive attitude towards wine (Nielsen, 2007): the taste of wine is appreciated and the product suits formal consumption occasions (Atkin & Thach, 2012; Thach, 2005) but not parties, where spirits and beer are preferred (Olsen et al., 2007). Studies on Generation Y in Australia (Fountain & Fish, 2010) and New Zealand (Fountain & Lamb, 2011) show that the behavior towards wine consumption by young people is positive, too. On the other hand, studies show that in the Mediterranean countries wine consumption in this cohort is decreasing (Agnoli et al., 2011; De Magistris et al., 2011; Kevany, 2008) for the shift in the preferences towards other products such as beer and spirits.

The non-homogeneity of the cohort is also related to the "age" variable (Ritchie et al., 2009). As a matter of fact, the wide age range of the cohort makes the extending of the results to the entire generation very risky and difficult. Therefore, various studies focused on a narrower age range in the cohort, as is the case of the studies on College-Age Generation Y (Martin & Turley, 2004; Noble et al., 2009; Wolburg & Pokrywczynski, 2001).

In an increasingly competitive and saturated market, the study of Generation Y becomes very important since the study of this cohort, besides highlighting the current issues, is also pivotal in forecasting the trends of wine and alcohol consumption in the near future (De Magistris et al., 2011). Longitudinal studies have shown how the drinking habits change with aging, recording an increase in wine consumption in contrast to the reduction of beer and other

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[1] Another example of extreme behavior among young people is the recently developing use of "eyeballing", i.e. the intake of spirits by pouring drops in the eyes.

[2] According to the classification into generational cohorts of Lancaster and Stillman (2003), Generation Y includes people born between 1977 and 1999.

alcoholic beverages, such as spirits and FABs (Melo, Cox, Delahunty, & Forde, 2010; Mishra, McNaughton, Bramwell, & Wadsworth, 2006; Olsen et al., 2007). However, the degree of these changes is influenced by the current habits and by current marketing and consumer education strategies. In fact, many studies have focused on the category of young adults because of their importance for the implementation of nutritional education programs and for the development of prevention strategies; the importance of such strategies is also related to their additional benefits in terms of positively influencing the next generation: it is within this age range that many start families, passing their habits onto their children (Richards, Kattelmann, & Ren, 2006).

*The semantic differential approach*

The exploration of the meanings that alcoholic beverages have for consumers finds its theoretical premises in the semantic differential technique, developed in the 50s (Osgood, 1952; Osgood, Suci, & Tannenbaum, 1957). This tool allows the researcher to measure the meaning given to a stimulus through a standardized measurement procedure and it is used to detect the structure of the attitudes that play an important role in the explanation of consumer behavior (Ajzen, 2002; Ajzen & Fishbein, 2008; Fishbein & Ajzen, 1975). In this procedure, consumers are asked for their perception of the product using pairs of antithetical attributes. The semantic differential approach is characterized by the fact that no direct questions concerning the meaning of the object of the research are asked; the meaning is detected by the association that the respondent establishes between the object itself and the attributes suggested in a standardized way to all the interviewees (Nunnally, 1959).

In food consumer researches, the semantic differential approach is applied, for various purposes, in order to detect the attitudes of consumers and the results can be useful for both food producers and policy makers. Such a technique can be used to help in the ex-ante understanding of the intention to consume new products (Olsen, Heide, Dopico, & Toften, 2008) or to analyze the possible consumer response to specific product categories that are relevant within the new food consumption patterns, such as genetically modified foods (Spence & Townsend, 2006; Townsend, Clarke, & Travis 2004), functional foods (Verbeke, 2006; Verbeke, Scholderer, & Lahteenmaki, 2009), snacks (Bilman et al., 2010) and traditional food products (Almli, Verbeke, Vanhonacker, Naes, & Hersleth, 2011). Moreover, as the food market is proving increasingly sensitive to the healthy characteristics of products (Theodore, 2008), many studies applied the semantic differential as an attitude scaling procedure (Conner, Norman, & Bell, 2002) in relation to "wellness beverages" (Pohjanheimo & Sandell, 2009), to detect the effects of health related information (Stein, Nagai, Nakagawa, & Beauchamp, 2003; Tudoran, Ottar Olsen, & Dopico, 2009) on the expectations and perceptions of consumers. Other studies applied this methodology to explore the emotional response generated by the sensory attributes, such as the perceived image of the product in relation to price, brand and packaging (Guinard, Uotani, & Schlich, 2001; Seo et al., 2009; Shifferstein, 2009); other authors studied the link between attitudes and eating habits (Honkanen, Olsen, & Verplanken, 2005) in order to explore how ambivalent attitudes towards a product, characterized by a conflict between health and pleasure, affect consumer behavior (Berndsen & van der Pligt, 2004).

*Research design*

This study is based on a direct survey to 430 Tuscan young adults aged 18–35 face-to-face interviews. Being an exploratory study, the survey was not conducted with the aim of statistical inference and the sampling was non probabilistic. The snowball method was chosen for the sampling as it is widely used and considered appropriate for sociological studies related to sensitive subjects such as alcohol consumption (Conti & Marella, 2012). The age range is similar to that of Generation Y; however, people under 18 were not interviewed because of the difficulty of obtaining permission to interview minors and the fact that, in Italy, the consumption of alcoholic beverages is prohibited for anyone under 16. The questionnaire was divided into three sections: the first referring to the detection of the socio-demographic variables of the interviewees (sex, age, profession), the second to the recording of the behavior related to the use of alcoholic beverages (what, when, where and how much), the third to the exploration of the cognitive meanings of the products. This section includes an analysis of all the beverages, including soft drinks. Even if the consumption of non-alcoholic beverages is not the focus of this study, the presence of soft drinks in the analysis is aimed at obtaining a wider and more complete vision of the attitudes of young consumers.

The sample, given the wide age range under consideration, has been segmented into four age groups (18–20, 21–24, 25–29 and 30–35). In addition, to assess behavioral habits, the questionnaire considered mainly questions with 4-point scales and, to a lesser extent, politomic questions.

*Semantic differential*

The last section of the questionnaire supplied, for each product, a list of seventeen antithetical attributes with a rating scale of seven positions, coded from 1 to 7. For the choice of the attributes, the following criteria were applied: the relevance to the subject of the investigation, the lexical familiarity of the respondents with the target and the neutrality from value judgments (Maggino & Mola, 2007). The selection of adjectives for this work is based on the list of pairs of attributes used by Osgood (Osgood et al., 1957) and integrated with other existing sources in the literature (Ferrarini et al., 2010); the selection was further verified with a direct discussion with academy and industry experts. The list of adjectives also includes those commonly used in food related studies (Armitage & Conner, 1999).

In detail, the dyads of attributes are: cheap-expensive, happy-sad, young-old, comfortable-uncomfortable, intimate-collective; sophisticated-ordinary, pleasant-unpleasant; usual-occasional, classic-modern, relaxing-exciting, not-socializing-socializing, sacred-profane; euphoric-depressing; quality-poor quality, status symbol-not status symbol; appealing-not appealing, trendy-not trendy.

*The threeway data analysis*

The database obtained with the questionnaires was organized in a Three Way Dataset, indexing the collected data in a three-way matrix according to three criteria or ways: interviewed individuals ($i = 1,2, \ldots, I$), variables detected by the semantic differential method ($j = 1,2,\ldots, J$) and occasions ($k = 1,2,\ldots, K$). In other words, the three-way matrix can be seen as a set of two-way matrices called "slices" divided into "frontal" ($K$ matrices of order $I \times J$), "horizontal" ($I$ matrices of order $J \times K$) and "lateral" ($J$ matrices of order $I \times K$). In our case the three-way matrix can be represented in formal terms by the following structure:

$$\boxed{\phantom{xx}}_{i,j,k} = \{i = 1, \ldots, 430; j = 1, \ldots, 17; k = 1, \ldots, 5\} \qquad (1)$$

To describe and interpret the information provided by a multiway matrix, the statistical methodology has recently developed a number of approaches within the so-called Multiway Analysis (Bolasco & Coppi, 1989; Kiers, 1988; Kroonenberg, 1992; Rizzi & Vichi, 1995). The techniques that have been used in this study are almost

**Table 1**
Socio-demographic characteristics of the sample.

| | |
|---|---|
| *Gender* | |
| Male | 57.0% |
| Female | 43.0% |
| *Age* | |
| 18–20 | 18.8% |
| 21–24 | 50.2% |
| 25–29 | 18.6% |
| 30–35 | 12.4% |
| *Profession* | |
| Manager | 1.6% |
| Entrepreneur | 6.7% |
| Employee | 25.8% |
| Student | 56.8% |
| Other | 9.1% |

analysis (PCA) and hierarchical clustering (HCPC), in order to improve the description of the data. The combination of these methods is used to better describe the resemblances between individuals. The principal components analysis was carried out first: in this step the reduction of the variables is achieved by transforming the data into a new set of continuous variables, called the principal components. The principal components method can be considered as a pre-process for clustering. In the second phase, then, the identification of homogeneous groups of individuals on the factorial design through a hierarchical clustering on principal components was carried out (Husson, Josse, & Pagès, 2010). Hierarchical clustering is conducted on the space of the two PCA principal components (Dim. 1 and Dim. 2 that will be later discussed and shown in Fig. 4). The components synthesize the semantic perception of beverages by the interviewees. The objective of the analysis was to provide a descriptive framework to investigate the structure of preferences of young people in relation to the different alcohol products.

exclusively exploratory (not probabilistic), and work with a model based on the decomposition of the variability of the available information. In the literature, this decomposition model involves two different orders of techniques: a first one allows the analysis of the three basic objectives described above in a single phase (for example, multi-linear models of Tucker (1966)), while a second one analyzes these objectives in separated phases.

This study applies the Multiple Factor Analysis (FMA) (Escofier & Pagès, 1984) in order to get information on the overall comparison of the occasions and on the structural configuration, both "average", and "fine". The first aspect is based on the comparison of the structures of the matrices of the single opportunities and allows the detection of any differences or similarities between the occasions, the average structure refers to the deep relationship among the units and among the variables regardless of the single occasions; the "fine" analysis allows a detailed examination of differences in the evaluation among the single units or among the single variables for different occasions. This paper uses a combination of two exploratory data analysis methods: principal component

## Results

The descriptive analysis of the sample (Table 1) shows that 57% of it is represented by males; about 50% of the interviewees is in the 21–24 age range, while the most represented activity is that of student (as it is easily expected from an under 35 sample).

The analysis of drinking behavior (Table 2) shows two consumption typologies: one indoor, with preferences towards wine and beer, and one outdoor, where beer is strongly preferred to wine and spirits are consumed in an average/high quantity by 30% of the sample.

In relation to age, beer and wine show antithetical trends, as beer consumption decreases for higher age groups while wine consumption increases.

Table 3 shows the consumption occasions for the analyzed beverages (the results for alcopop were not shown because of

**Table 2**
Consumption behavior.

| | Indoor | | | | Outdoor | | | |
|---|---|---|---|---|---|---|---|---|
| | Wine (%) | Beer (%) | Spirits (%) | FABs (%) | Wine (%) | Beer (%) | Spirits (%) | FABs (%) |
| Never | 21 | 26 | 61 | 76 | 20 | 14 | 21 | 59 |
| Sometimes | 48 | 46 | 31 | 21 | 46 | 31 | 49 | 34 |
| Quite often | 21 | 19 | 7 | 3 | 23 | 33 | 19 | 5 |
| Often | 10 | 9 | 2 | 0 | 11 | 22 | 11 | 1 |

**Table 3**
Consumption occasions.

| | During meals (%) | Out, at night (%) | During weekends (%) | Before dinner (%) | When it happens (%) |
|---|---|---|---|---|---|
| *Wine* | | | | | |
| Never | 20 | 36 | 18 | 65 | 42 |
| Sometimes | 40 | 39 | 38 | 28 | 43 |
| Quite often | 23 | 18 | 29 | 6 | 10 |
| Often | 17 | 7 | 15 | 2 | 5 |
| *Beer* | | | | | |
| Never | 31 | 16 | 15 | 65 | 39 |
| Sometimes | 44 | 29 | 28 | 25 | 36 |
| Quite often | 18 | 34 | 34 | 7 | 16 |
| Often | 7 | 21 | 23 | 3 | 9 |
| *Spirits* | | | | | |
| Never | 91 | 23 | 22 | 87 | 57 |
| Sometimes | 8 | 40 | 39 | 11 | 34 |
| Quite often | 1 | 22 | 24 | 2 | 6 |
| Often | 1 | 15 | 15 | 0 | 3 |

the limited relevancy of their consumption). The results show that wine is mostly consumed during meals; on the other hand, beer and spirits are mostly consumed outdoor, in the evening and during the weekend.

Regarding the preferred purchase locations (Table 4), wine is mostly bought in restaurants/pizzerias and supermarkets, beer is mainly purchased in bars/pubs/beer houses, supermarkets and restaurants/pizzerias and, lastly, spirits are commonly bought in discos and dance clubs.

The motivations behind the consumption of alcoholic beverages (Table 5) can be summarized as follows: 65% of the sample gives medium/high importance to "taste", 61% to "having fun with friends", while 35% perceives "getting drunk" as a medium/high motivation.

The observation of binge drinking and excessive consumption behaviors in the last two months leads to the identification of three different consumption categories: "responsible drinkers" (31.4%), " drinkers with a risky behavior" (33%) and "non responsible drinkers" (35.6%).

Regarding the analysis of data with the semantic differential approach, the bar chart in Fig. 1 shows the percentage of variance explained by each dimension provided by a Principal Components Analysis (PCA). The first two main factors of variability summarize about 15.6% of the total inertia represented by the first plane. The importance of this percentage should not be evaluated without taking into account the number of individuals (430) and the total number of active variables (85). It may be interesting to compare this percentage with the 0.95 quantile of the distribution of the percentages obtained by simulating 1,000 data tables of equivalent size on the basis of normal distribution. The result of the simulation is worth 4.8%: even if a percentage of 15.6% seems low, it indicates a significantly structure of data.

The graph of occasions (Fig. 2) shows different groups of products: wine, beer and spirits are strongly related to the first dimension, while FABs and soft drinks are related to the second (see also Appendix).

The graph of variables (Fig. 3 and Appendix) confirms this classification adding new details. Beer and spirits are related to the first dimension especially because of the evaluation of terms like "Young", "Social", "Euphoric", "Happy", "Appealing" and "Trendy". The difference between the two products is given by a higher projection of spirits on the second dimension. Wine is still related to the first dimension, but with lower coefficients and a partially different set of variables, as terms like "Pleasure", "Quality" and "Comfortable" have higher values. Soft drinks and FABs, on the other hand, are related to the other dimension as previously stated: the variables that have a higher impact on this are only partially overlapping: "Appealing", "Quality", "Happy", "Pleasant", "Euphoric", "Status" and "Trendy".

Lastly, Figs. 4 and 5 show the groups of individuals obtained using the HCPC on the space of the components (Fig. 4) and the average evaluations of semantic differential pairs of terms (Fig. 5). Cluster 1 is negatively correlated with the first component and, to a lesser extent, to the second; coherently, all evaluation variables show a quite low value. Cluster 2, on the other hand, is characterized by a positive correlation with the first component and a negative correlation with the second (Fig. 4), showing relatively high values for wine and beer, intermediate values for spirits and lower values for soft drinks and FABs. Cluster 3 is correlated to both components and shows higher values for all products.

The difference in the perception of beverages among the clusters is mirrored by the difference in the socio-economic characteristics and behaviors of the consumers.

As a matter of fact, analyzing the three clusters using the socio-demographic variables, it is possible to observe that under 25 consumers mostly belong to Cluster 3, while over 25 consumers mostly belong to Cluster 1. There is no substantial difference between males and females in Clusters 1 and 3, but Cluster 2 is mainly composed my males. Regarding consumption modalities, Cluster 1 is characterized by a responsible consumption behavior, while Clusters 2 and 3 are characterized by a riskier behavior tending towards non responsible drinking, especially for Cluster 2.

**Table 4**
Purchase locations.

|  | Supermarket (%) | Bar/pub (%) | Club/disco (%) | Restaurant/pizzeria (%) | Wine shop (%) | Traditional food shop (%) |
|---|---|---|---|---|---|---|
| *Wine* | | | | | | |
| Never | 25 | 47 | 85 | 20 | 43 | 49 |
| Sometimes | 32 | 35 | 8 | 38 | 27 | 36 |
| Quite often | 27 | 13 | 4 | 32 | 17 | 11 |
| Often | 16 | 5 | 2 | 11 | 12 | 3 |
| *Beer* | | | | | | |
| Never | 20 | 13 | 67 | 17 | 87 | 54 |
| Sometimes | 27 | 21 | 19 | 33 | 9 | 32 |
| Quite often | 29 | 35 | 9 | 35 | 3 | 8 |
| Often | 24 | 31 | 5 | 15 | 1 | 6 |
| *Spirits* | | | | | | |
| Never | 46 | 31 | 29 | 76 | 91 | 80 |
| Sometimes | 30 | 35 | 25 | 19 | 7 | 15 |
| Quite often | 13 | 22 | 22 | 3 | 1 | 5 |
| Often | 10 | 12 | 23 | 1 | 1 | 1 |

**Table 5**
Answer to the question "Why do you like drinking alcoholic beverages?".

|  | To have fun with friends (%) | To socialize (%) | To lower inhibitions (%) | Because of the taste (%) | Curiosity (%) | To get drunk (%) | Because my friends do it (%) |
|---|---|---|---|---|---|---|---|
| Not at all | 15 | 17 | 35 | 12 | 40 | 40 | 68 |
| A little | 23 | 33 | 30 | 23 | 34 | 26 | 22 |
| Quite | 40 | 37 | 27 | 46 | 21 | 24 | 7 |
| Very much | 21 | 14 | 9 | 19 | 6 | 11 | 3 |
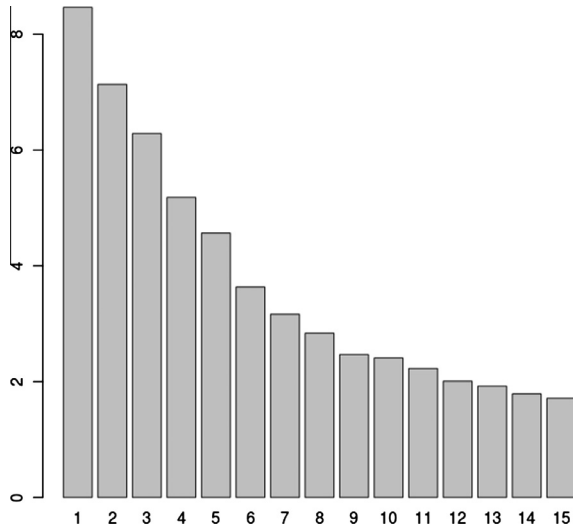
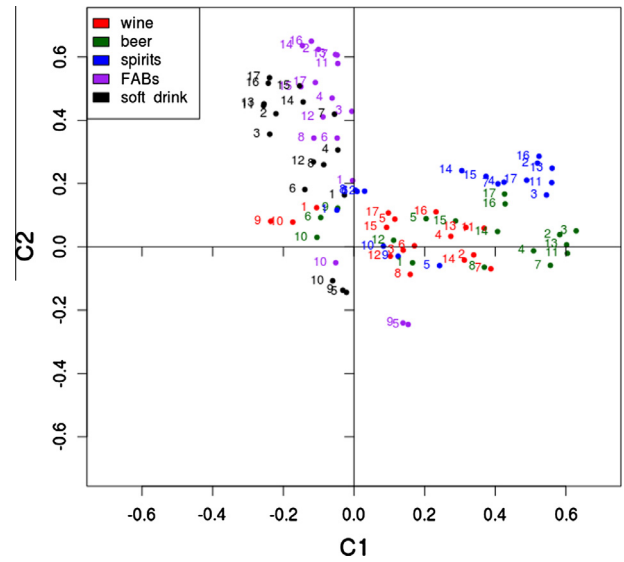**Fig. 1.** Inertia associated with each dimension.
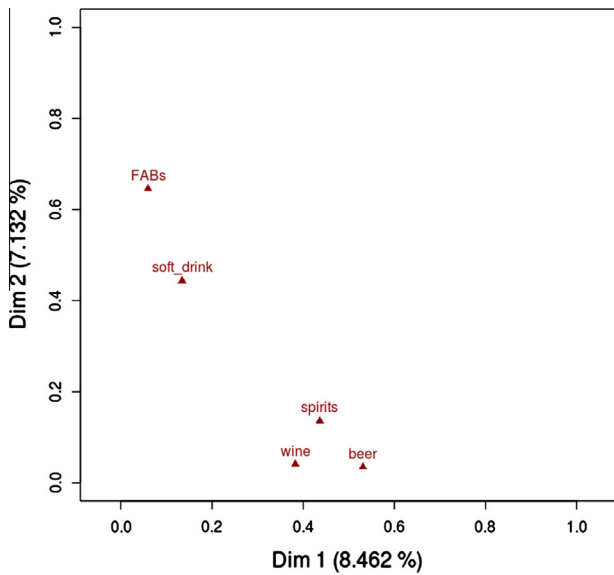


**Fig. 2.** Graph of the occasions.
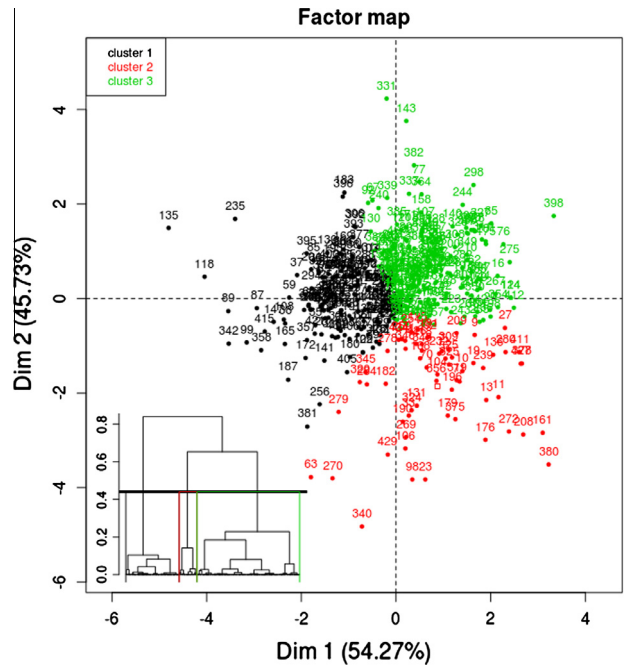


**Fig. 3.** Graph of variables.



**Fig. 4.** Clusters of consumers on the space of the components.

These data are confirmed by the analysis of "getting drunk" as a drinking motivation: in Cluster 1 such a motivation is marginal for 75% of the consumers, while for Clusters 2 and 3 it is of higher importance for more than 50% of consumers.

To better underline the most important differences in the characteristics of the clusters, such characteristics are summarized in Table 6.

**Discussion and conclusions**

This study has analyzed the attitude towards different beverages by young consumers, a category that often expresses preferences towards products other than wine and often indulge in risky consumption behaviors. By highlighting how consumer perceive different beverages, a first set of attributes that determine purchase behavior is supplied. The analysis that was carried out in this study allows for the identification of three groups of consumers with different perceptions of the provided semantic variables; this is an important knowledge basis for both private

companies and the public decision maker in order to implement specific communication strategies – with target characteristics provided by the cluster analysis – using the "lexicon of the consumer" (Bech-Larsen, Nielsen, Grunert, & Sorensen, 1996; Reynolds & Rochon, 1991).

Regarding wine, it is clear that all the groups show a similar perception of it: wine is perceived as a sophisticated, classic, sacred, pleasant and quality product, all characteristics that are related to intimate gratification and contribute to creating a "psychological subjection" feeling in the consumer towards an "elite" product.

Even though it is impossible to identify a single cause, the lack of wine knowledge by young consumers (De Magistris et al., 2011) is of primary importance for the identification of it as an "elite" product (Barber et al., 2008) that does not allow them to get close
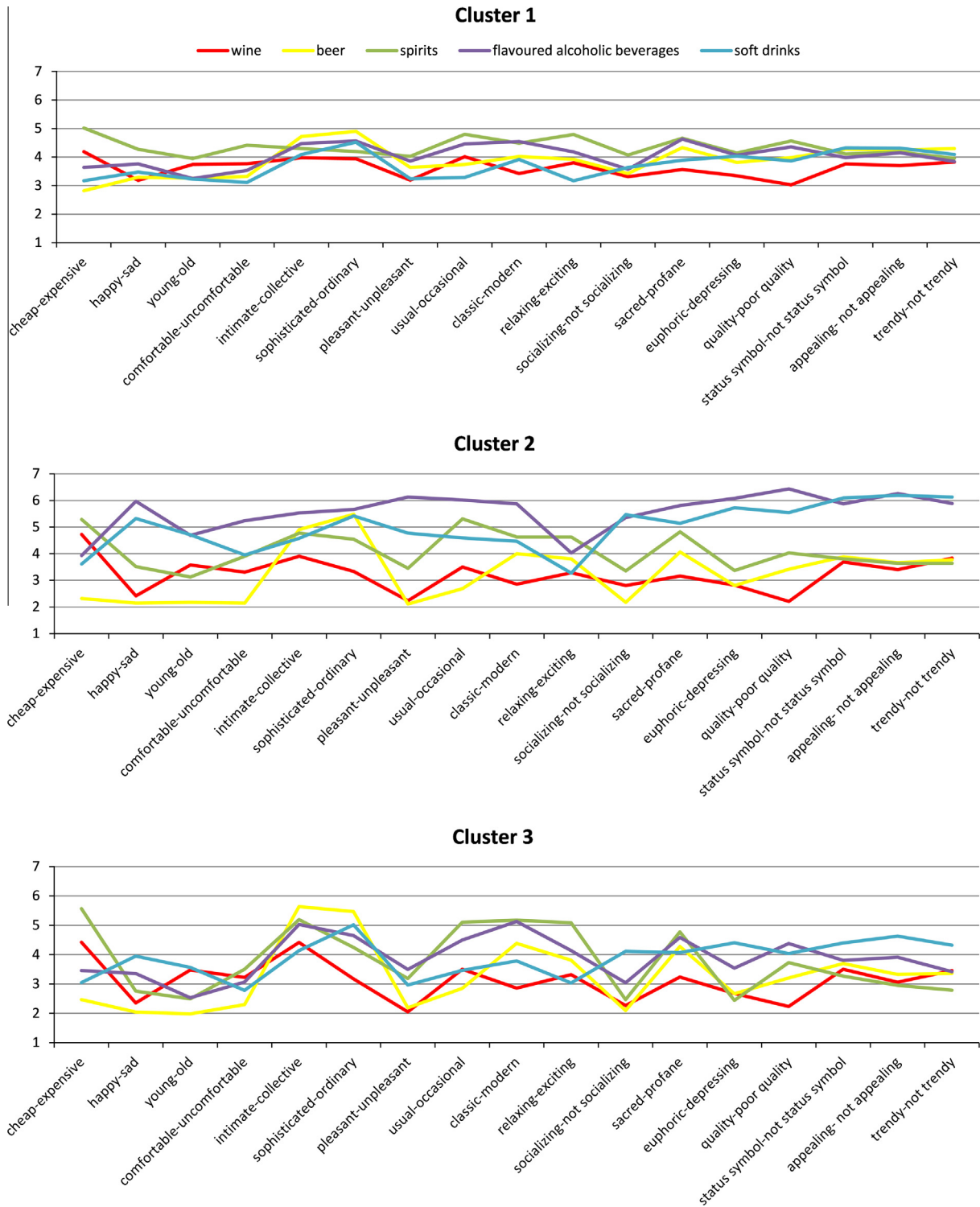
## Cluster 1



## Cluster 2



## Cluster 3



**Fig. 5.** Semantic differential average evaluations for the Clusters of consumers .

**Table 6**
The three clusters.

|  | Cluster 1 | Cluster 2 | Cluster 3 |
|---|---|---|---|
| Definition | Older, responsible drinkers | Young, male, irresponsible drinkers | Young drinkers at risk |
| Indoor | They drink less than other clusters | More beer than other clusters | More wine than other clusters |
| Outdoor | They drink less than other clusters | Beer and spirits in large quantity | Beer and spirits, but less than Cluster 2 |
| Getting drunk | Not an important motivation | Very important motivation | Rather important motivation |

to it without feeling inappropriate and unable to choose properly. This means that the message that wine producers will have to work against in order to gain a wider access to this category of consumers is that of the "nobility" of wine and its "non collective" perception ("wine does not draw people together because not everybody is able to appreciate it").

On the other hand, young people perceive beer as a collective and socializing drink, suitable for groups (i.e. the importance given to semantic attributes such as "young", "happy" and, on the economic side, "cheap"). These characteristics are heavily present in Clusters 2 and 3, sharing a common perception of beer and spirits which is very different from the one shown by Cluster 1. The fact that spirits are perceived as "exciting" and "trendy" suggests a communication intervention by the public sector in order to redefine the approach to these products in an attempt to reverse the attitude towards "external gratification" attributes. Such a task needs to consider the predominant emulative behavior typical of younger consumers and their need to conform to the group's conduct in order to be accepted by it and to fuel their sense of belonging.

For FABs and soft drinks, Cluster 2 shows a higher intensity in the negative perception of external gratification attributes such as "status symbol", "appealing" or "trendy", indicating that such products are not part of the sample's preferences.

The use of multivariate models highlighted the opportunity to implement such methodologies in order to detect the semantic perception of the attributes of different beverages with regard to the consumer's behavioral aspects. As a matter of fact, associating clusters deriving from different attitudes towards beverages to consumption habits indicates that Clusters 2 and 3 are more connected to not responsible or risky alcohol consumption behaviors, with beer and spirits as the beverages that differentiate such behaviors from responsible ones; this confirms that the preferences for wine increase with age and lead to more responsible drinking habits. Other studies have shown how the increase of wine consumption together with the decrease of the consumption of other beverages is positively correlated to aging (Fountain & Lamb, 2011; Melo et al. 2010), a quite common situation in traditional European wine markets (Mueller et al., 2011).

The sample used for this study includes only young Tuscan consumers. This limits the possibility to extend the results of the study to different scenarios and all the causality results must be interpreted with caution. However, the study can be the starting point for a large scale analysis in order to explain the attitudes towards alcoholic beverages both in different age cohorts and in different areas. The Tuscan case study, on the other hand, can serve as an emblematic example of how such issues are perceived in a territory where wine has a long production and consumption history and tradition: the psycological subjection of young consumers towards wine might indeed be related to the traditionally high involvement in the purchasing process that might amplify the sense of inadequacy; this scenario becomes even more complex as the relation between the older (tied to Mediterranean consumption patterns) and the younger generations (where globalisation and emulation play a predominant role in shaping their behavior) grow further and further apart. As highlighted by a recent study in another Italian wine region, consumption habits of the younger generations is becoming more and more similar to that of their peers from new wine consuming Countries, with a strong awareness of the different functions of beverages in different consumption occasions (Agnoli et al., 2011).

A future development of the research could be the in-depth motivational analysis of the choices of young consumers that links the products – as carriers of attributes – and the individuals (as carriers or values). Such a study might help in elicit semantic associations and cognitive networks that are very useful in the design of communication strategies. Building a message on the semantic perception variables is extremely useful from a public sector point of view when the aim is the increase of public health and the reduction of social costs deriving from a progressive departure from Mediterranean consumption patterns, as communication strategies are destined to be more successful if strongly adeherent to the language of the consumers (Reynolds & Whitlark, 1995). Specifically, the results of this study can represent, for the public sector, a starting point for an integrated social marketing plan aimed at raising the awareness of individuals about alcohol consumption (Rothschild, 2010). Such a plan should overcome sector logics towards a system approach that involves different stakeholders (Menghini et al., 2011). Moreover, the study of alcohol consumption patterns fits in the wider study of food consumption models, a topic that is gaining more and more relevance in relation to its health implications and its impact on national health systems (Casini, Contini, Marone, & Romano, 2013).

### Appendix A

Table of coefficients – 95% significance.

| Dimension 1 | | | Dimension 2 | | |
|---|---|---|---|---|---|
| Variable | Coefficient | Probability (%) | Variable | Coefficient | Probability (%) |
| SOCIAL_B | 0.585554 | 0.00 | APPEAL_FAB | 0.62300 | 0.00 |
| YOUNG_B | 0.581020 | 0.00 | HAPPY_FAB | 0.62150 | 0.00 |
| EUPHORIC_B | 0.549181 | 0.00 | PLEAS_FAB | 0.60359 | 0.00 |
| HAPPY_B | 0.531619 | 0.00 | EUPHORIC_FAB | 0.59771 | 0.00 |
| SOCIAL_SP | 0.529605 | 0.00 | QUALITY_FAB | 0.59049 | 0.00 |
| EUPHORIC_SP | 0.526811 | 0.00 | SOCIAL_FAB | 0.58011 | 0.00 |
| YOUNG_SP | 0.514708 | 0.00 | TRENDY_SD | 0.52604 | 0.00 |
| PLEAS_B | 0.512458 | 0.00 | TRENDY_FAB | 0.51147 | 0.00 |
| PLEAS_W | 0.485303 | 0.00 | APPEAL_SD | 0.51060 | 0.00 |
| COMFORT_B | 0.470213 | 0.00 | STATUS_SD | 0.49628 | 0.00 |
| HAPPY_SP | 0.466631 | 0.00 | COMFORT_FAB | 0.48980 | 0.00 |
| SOCIAL_W | 0.450429 | 0.00 | QUALITY_SD | 0.47210 | 0.00 |
| APPEAL_SP | 0.443190 | 0.00 | STATUS_FAB | 0.47049 | 0.00 |
| TRENDY_SP | 0.436114 | 0.00 | PLEAS_SD | 0.47021 | 0.00 |
| HAPPY_W | 0.416109 | 0.00 | YOUNG_FAB | 0.45762 | 0.00 |

**Appendix A.** (*continued*)

| Dimension 1 | | | Dimension 2 | | |
|---|---|---|---|---|---|
| Variable | Coefficient | Probability (%) | Variable | Coefficient | Probability (%) |
| QUALITY_W | 0.397821 | 0.00 | EUPHORIC_SD | 0.44379 | 0.00 |
| EUPHORIC_W | 0.381629 | 0.00 | HAPPY_SD | 0.44001 | 0.00 |
| COMFORT_SP | 0.371519 | 0.00 | SOCIAL_SD | 0.43238 | 0.00 |
| TRENDY_B | 0.370398 | 0.00 | YOUNG_SD | 0.38147 | 0.00 |
| APPEAL_B | 0.361418 | 0.00 | COMFORT_SD | 0.37061 | 0.00 |
| PLEAS_SP | 0.359508 | 0.00 | SACRED_FAB | 0.36552 | 0.00 |
| COMFORT_W | 0.339800 | 0.00 | USUAL_FAB | 0.31536 | 0.00 |
| USUAL_B | 0.332064 | 0.00 | SOPHIST_FAB | 0.29074 | 0.00 |
| QUALITY_B | 0.329359 | 0.00 | EUPHORIC_SP | 0.28791 | 0.00 |
| STATUS_SP | 0.323073 | 0.00 | APPEAL_SP | 0.28583 | 0.00 |
| APPEAL_W | 0.294347 | 0.00 | USUAL_SD | 0.28580 | 0.00 |
| INTIM_SP | 0.273033 | 0.00 | HAPPY_SP | 0.27863 | 0.00 |
| QUALITY_SP | 0.257879 | 0.00 | SACRED_SD | 0.26122 | 0.00 |
| STATUS_B | 0.233641 | 0.00 | SOCIAL_SP | 0.24654 | 0.00 |
| INTIM_B | 0.222244 | 0.00 | QUALITY_SP | 0.22921 | 0.00 |
| SOPHIST_W | 0.219649 | 0.00 | CHEAP_FAB | 0.22692 | 0.00 |
| INTIM_FAB | 0.210192 | 0.00 | TRENDY_SP | 0.22683 | 0.00 |
| USUAL_W | 0.208563 | 0.00 | STATUS_SP | 0.22438 | 0.00 |
| YOUNG_W | 0.208117 | 0.00 | YOUNG_SP | 0.21112 | 0.00 |
| CLASSIC_FAB | 0.202476 | 0.00 | COMFORT_SP | 0.19964 | 0.00 |
| CHEAP_B | 0.166390 | 0.05 | TRENDY_B | 0.19741 | 0.00 |
| TRENDY_W | 0.158218 | 0.10 | CHEAP_SD | 0.19549 | 0.00 |
| CLASSIC_SP | 0.152987 | 0.15 | APPEAL_W | 0.18326 | 0.01 |
| SACRED_W | 0.149651 | 0.19 | PLEAS_SP | 0.18305 | 0.01 |
| STATUS_W | 0.148935 | 0.20 | TRENDY_W | 0.16845 | 0.05 |
| RELAX_SP | 0.106692 | 2.69 | INTIM_B | 0.16710 | 0.05 |
| PLEAS_SD | −0.095422 | 4.80 | SOCIAL_W | 0.15343 | 0.14 |
| SOPHIST_FAB | −0.109804 | 2.28 | APPEAL_B | 0.15340 | 0.14 |
| USUAL_SD | −0.113915 | 1.81 | EUPHORIC_W | 0.13750 | 0.43 |
| USUAL_FAB | −0.138519 | 0.40 | SOPHIST_SD | 0.13621 | 0.47 |
| CHEAP_W | −0.139184 | 0.38 | CLASSIC_B | 0.13143 | 0.63 |
| HAPPY_FAB | −0.140361 | 0.35 | SOPHIST_SP | 0.12596 | 0.89 |
| TRENDY_FAB | −0.146243 | 0.24 | YOUNG_B | 0.12136 | 1.18 |
| SOPHIST_B | −0.147792 | 0.21 | STATUS_W | 0.10720 | 2.62 |
| SACRED_FAB | −0.148479 | 0.20 | SACRED_SP | 0.10539 | 2.89 |
| SACRED_SD | −0.157426 | 0.11 | COMFORT_W | 0.10409 | 3.09 |
| APPEAL_FAB | −0.181938 | 0.01 | USUAL_SP | 0.10328 | 3.23 |
| SOPHIST_SD | −0.194865 | 0.00 | HAPPY_B | 0.09888 | 4.04 |
| QUALITY_SD | −0.197416 | 0.00 | INTIM_SD | −0.11851 | 1.39 |
| STATUS_FAB | −0.201343 | 0.00 | RELAX_SD | −0.14248 | 0.31 |
| QUALITY_FAB | −0.210740 | 0.00 | CLASSIC_SD | −0.14779 | 0.21 |
| RELAX_W | −0.219775 | 0.00 | CLASSIC_FAB | −0.17914 | 0.02 |
| STATUS_SD | −0.228088 | 0.00 | INTIM_FAB | −0.18185 | 0.01 |
| CLASSIC_W | −0.249882 | 0.00 | | | |
| YOUNG_SD | −0.261739 | 0.00 | | | |
| HAPPY_SD | −0.267856 | 0.00 | | | |
| TRENDY_SD | −0.303172 | 0.00 | | | |
| APPEAL_SD | −0.308767 | 0.00 | | | |
| EUPHORIC_SD | −0.316089 | 0.00 | | | |
| SOCIAL_SD | −0.317589 | 0.00 | | | |

# References

Agnoli, L., Begalli, D., & Capitello, R. (2011). Generation Y's perception of wine and consumption situations in a traditional wine-producing region. *International Journal of Wine Business Research, 23*(2), 176–192.

Ahlstrom, S. K., & Osterberg, E. L. (2008). International perspectives on adolescent and young adult drinking. *Addiction, 103*, 258–268.

Ajzen, I. (2002). Perceived behavioral control, self-efficacy, locus of control, and the theory of planned behavior. *Journal of Applied Social Psychology, 32*, 665–683.

Ajzen, I., & Fishbein, M. (2008). Scaling and testing multiplicative combinations in the expectancy-value model of attitudes. *Journal of Applied Social Psychology, 38*(9), 2222–2247.

Allamani, A., Cipriani, F., Prina, F. (Eds.) (2006). I cambiamenti nei consumi di bevande alcoliche in Italia. Una stima esplorativa sul decremento dei consumi negli anni 1970–2000, Osservatorio Permanente sui Giovani e l'Alcol, Casa EditriceLitos, Roma.

Almli, V. L., Verbeke, W., Vanhonacker, F., Naes, T., & Hersleth, M. (2011). General image and attribute perceptions of traditional food in six European countries. *Food Quality and Preference, 22*, 129–138.

Anderson, P., & Baumberg, B. (2006). *Alcohol in Europe. A public health perspective.* London: Institute of Alcohol Studies.

Armitage, C. J., & Conner, M. (1999). The theory of planned behaviour. Assessment of predictive validity and perceived control. *British Journal of Social Psychology, 38*, 35–54.

Atkin, T., Thach, L., 2012. Millennial wine consumers. Risk perception and information search, *Wine Economics and Policy, ISSN 2212-9774*, 10.1016/j.wep.2012.08.002. <http://www.sciencedirect.com/science/article/pii/S2212977412000038>. 23.09.12.

Barber, N., Dodd, T., & Ghiselli, R. (2008). Capturing the younger wine consumer. *Journal of Wine Research, 19*(2), 123–141.

Bech-Larsen, T., Nielsen, N. A., Grunert, K. G., & Sorensen, E. (1996). *"Means-end chains for low involvement food products-A study of Danish cognition regarding different application of vegetable oil", working paper 41.* Aarhus: The Aarhus School of Business.

Berndsen, M., & van der Pligt, J. (2004). Ambivalence towards meat. *Appetite, 42*, 71–78.

Bilman, E. M., Van Trijp, J. C. M., & Renes, R. J. (2010). Consumer perceptions of satiety-related snack food decision making. *Appetite, 55*, 639–647.

Bolasco, S., & Coppi, R. (Eds.). (1989). *Analysis of multiway data matrices.* Amsterdam: Elsevier Science Publishers.

Casini, L., Contini, C., Marone, E., & Romano, C. (2013). Food habits. Changes among young Italians in the last 10 years. *Appetite, 68*, 21–29.

Charters, S. (2006). *Wine and society. The social and cultural context of a drink.* Oxford: Elsevier Butterworth-Heinemann.

Charters, S., Fountain, J., Kolyesnikova, N., Ritchie, C., Thach, L., Dodd, T., et al. (2011). Generation Y and sparkling wines. A cross-cultural perspective. *International Journal of Wine Business Research, 23*(2), 161–175.

Cherpitel, C. J., Borges, G., Giesbrecht, N., Hungerford, D., Peden, M., Poznyak, V., et al. (2009). *Alcohol and injuries. Emergency Department Studies in an international perspective.* World Health Organization.

Collins, D. J., & Lapsley, H. M. (2002). *Counting the cost. Estimates of the social costs of drug abuse in Australia 1998–1999.* Canberra: Commonwealth Department of Health and Ageing.

Conner, M., Norman, P., & Bell, R. (2002). The theory of planned behaviour and healthy eating. *Health Psychology, 21*(2), 194–201.

Conti, P. L., & Marella, D. (2012). *Campionamento da popolazioni finite. Il disegno campionario.* Springer.

De Magistris, T., Groot, E., Gracia, A., & Albisu, L. M. (2011). Do Millennial generation's wine preferences of the 'New World' differ from the 'Old World'. A pilot study. *International Journal of Wine Business Research, 23*(2), 145–160.

Degenhardt, L., Dierker, L., Chiu, W. T., Medina-Mora, M. E., Neumark, Y., Sampson, N., Alonso, J., Angermeyer, M., Anthony, J.C., Bruffaerts, R., De Girolamo, G., De Graaf, R., Gureye, O., Karam, A, N., Kostyuchenko, S., Lee, S., Lepine, J. P., Levinson, D., Nakamura, Y., Posada-Villa, J., Stein, D., Wells, J. E., Kessler, R. C. (2010). Evaluating the drug use "gateway" theory using cross national data. Consistency and associations of the order of initiation of drug use among participants in the WHO World Mental Health Surveys, Drug and Alcohol Dependence (pp. 84–97). Vol. 108(1).

Durvasula, S., & Lysonski, S. (2008). A double-edged sword. Understanding vanity across cultures. *Journal of Consumer Marketing, 25*(4), 230–244.

Ebenkamp, B., & Marciniak, J. (2002). Why aren't they worried? *Brandweek, 43*, 29–32.

Escofier, B., Pagès, J. (1984). L'analyse factorielle multiple. In Cahiers du Bureau Univ. Recherche Operat., Série Recherche 423.

Fabris, G. (2003). *Il nuovo consumatore. Verso il postmoderno.* Milano: Franco Angeli.

Ferrarini, R., Carbognin, C., Casarotti, E. M., Nicolis, E., Nencini, A., & Meneghini, A. M. (2010). The emotional response to wine consumption. *Food Quality and Preference, 21*(7), 720–725.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior. An introduction to theory and research.* Reading, MA: Addison-Wesley.

Fountain, J., Fish, N. (2010). It's a happy drink. Australasian Generation Y's experiences and perception of sparkling wine. In *Proceedings 5th International Academy of Wine Business Research Conference*, Auckland.

Fountain, J., & Lamb, C. (2011). Generation Y as young wine consumers in New Zealand. How do they differ from Generation X. *International Journal of Wine Business Research, 23*(2), 107–124.

Gordon, R., McDermott, L., Stead, M., & Angus, K. (2006). The effectiveness of social marketing interventions for health improvement. What's the evidence? *Public Health, 120*, 1133–1139.

Guinard, J. X., Uotani, B., & Schlich, P. (2001). Internal and external mapping of preferences for commercial lager beers. Comparison of pedoni ratings by consumers blind versus with knowledge of brand and price. *Food Quality and Preference, 12*, 243–255.

Honkanen, P., Olsen, S. O., & Verplanken, B. (2005). Intention to consume seafood-the importance of habit. *Appetite, 45*, 161–168.

Huang, Y. C., & Petrick, J. F. (2010). Generation Y's travel behaviours. A comparison with baby boomers and Generation X. In P. Benckendorff, G. Moscardo, & D. Pendergast (Eds.), *Tourism and Generation Y* (pp. 27–37). Wallingford: CABI.

Husson, F., Josse, J., Pagès, J. (2010). Principal component methods – hierarchical clustering. Partitional clustering. *Why would we need to choose for visualizing data?* Technical Report of the Applied Mathematics Department (Agrocampus), September.

Kevany, S. (2008). French millennials drinking less, Americans more. *Meninger's Wine Business International, 3*, 13–17.

Kiers, H.A.L. (1988). Principal Components Analysis on a mixture of quantitative and qualitative data based on generalized correlation coefficients. In Jansen, M. G. H., van Schuur, W. H. (Eds.). The many faces of multivariate analysis. Vol. I, *Proceedings of the SMABS-88 Conference in Groningen* (pp. 67–81).

Kotler, P., & Zaltman, G. (1971). Social marketing: an approach to planned social change. *Journal of Marketing, 35*, 3–12.

Kroonenberg, P. M. (1992). PARAFAC in three-way land. Comment on Leurgans and Ross. *Statistical Science, 7*, 312–314.

Kuntsche, E., Rehm, J., & Gmel, G. (2004). Characteristics of binge drinkers in Europe. *Social Science & Medicine, 59*, 113–127.

Lancaster, L. C. Stillman, D. (2003). When generations collide. Who They Are. Why They Clash. *How to solve the generational puzzle at work*, Harperbusiness, New York, NY.

Maggino, F., & Mola, T. (2007). *Il differenziale semantico per la misura degli atteggiamenti. Costruzione, applicazione e analisi. Presentazione di uno studio.* Firenze: Firenze University Press, Archivio E-Prints.

Marchini, A., & Pieroni, L. (2009). *Dinamiche intergenerazionali nei modelli di consumo alimentare. il caso della dieta mediterranea in Italia.* Milano: XLIV Convegno Sidea, Franco Angeli.

Marinelli, N. (2010). Asimmetrie informative e sicurezza alimentare nei diritti del consumatore e nella competitività dei sistemi produttivi. *Italian Journal of Agronomy, 4*(Suppl.), 13–21.

Martin, C. A., & Turley, L. W. (2004). Malls and consumption motivation. An exploratory examination of older Generation Y consumers. *International Journal of Retail Distribution Management, 32*(10), 464–475.

Melo, L., Cox, D. N., Delahunty, C., Forde, C. (2010). "Alcohol and wine consumptions' patterns over consumers' lifetimes", In *Proceedings 5th International Conference of the Academy of Wine Business Research*, Auckland.

Menghini, S., Marinelli, N., Fabbrizzi, S. (2011). Il consumo responsabile di alcol dei giovani in Toscana. Analisi delle caratteristiche del consumatore e studio sulla fattibilità di una strategia di marketing sociale. In Marinelli, A. (Eds), Alcol e giovani. *Disagio sociale, salute e competitività* (pp. 105–170), Franco Angeli, Milano.

Menghini, S., & Marinelli, N. (2011). Sustainability and markets in the theories of welfare and consumer behavior. *Italian Journal of Agronomy, 6*(Suppl. 2), 55–59.

Mishra, G. D., McNaughton, S. A., Bramwell, G. D., & Wadsworth, M. E. (2006). Longitudinal changes in dietary patterns during adult life. *British Journal of Nutrition, 96*, 735–744.

Mueller, S., Remaud, H., & Chabin, Y. (2011). How strong and generalisable is the Generation Y phenomenon? A cross-cultural study for wine. *International Journal of Wine Business Research, 23*(2), 125–144.

Nielsen (2007). Millennial consumers seek new tastes, willing to pay a premium for alcoholic beverages, News release from the Nielsen Company, <www.nielsen.com>.

Noble, S. M., Haytko, D. L., & Phillips, J. (2009). What drives college-age Generation Y consumers? *Journal of Business Research, 62*, 617–628.

Noble, S. M., & Schewe, C. D. (2003). Cohort segmentation. An exploration of its validity. *Journal of Business Research, 56*, 979–987.

Nowak, L., Thach, L., & Olsen, J. E. (2006). Wowing the Millennials. Creating brand equity in the wine industry. *Journal of Product & Brand Management, 15*(5), 316–323.

Nunnally, J. C. (1959). *Test and Measurement. Assessment and Prediction.* New York: McGraw-Hill.

Olsen, S. O., Heide, M., Dopico, D. C., & Toften, K. (2008). Explaining intention to consume a new fish product. A cross-generational and cross-cultural comparison. *Food Quality and Preference, 19*, 618–627.

Olsen, J. E., Thach, L., & Nowak, L. (2007). Wine for my generation. Exploring how US wine consumers are socialized to wine. *Journal of Wine Research, 18*, 1–18.

Osgood, C. E. (1952). The nature and measurement of meaning. *Psychological Bulletin, 49*, 197–237.

Osgood, C. E., Suci, G. J., & Tannenbaum, P. H. (1957). *The measurement of meaning.* Urbana: University of Illinois Press.

Pendergast, D., 2010. Getting to know the Y Generation. In Benckendorff, P., Moscardo, G., Pendergast, D. (Eds), *Tourism and Generation Y* (pp. 1–15), CABI, Wallingford.

Pohjanheimo, T. A., & Sandell, M. A. (2009). Headspace volatiles contributing to flavor and consumer liking of wellness beverages. *Food Chemistry, 115*, 843–851.

Reynolds, T. J., & Rochon, J. D. (1991). Means-end based advertising research. Copy testing is not strategy assessment. *Journal of Business Research, 22*(4), 131–142.

Reynolds, T. J., & Whitlark, D. B. (1995). Applying laddering data to communications strategy and advertising practice. *Journal of Advertising Research* (July/August).

Richards, A., Kattelmann, K. K., & Ren, C. (2006). Motivating 18–24 year olds to increase their fruit and vegetable consumption. *Journal of the American Dietetic Association, 106*(9), 1405–1411.

Ritchie, C., Ritchie, F., & Ward, R. (2009). A good night out. Alcohol-related behaviour in young adults. *Worldwide Hospitality & Tourism Themes, 1*(2), 69–93.

Rizzi, A., & Vichi, M. (1995). *Three-way data set analysis su some relations between matrices and structures of multidimensional data analysis.* Pisa: Giardinieditori.

Rothschild, M. L. (2010). Using social marketing to manage population health performance. *Preventing chronic disease*, No. 7. <http://www.cdc.gov/pcd/issues/2010/sep/10_0034.htm>.

Rothschild, M. L., Mastin, B., & Miller, T. W. (2006). Reducing alcohol-impaired driving through the use of social marketing. *Accident Analysis & Prevention, 38*, 1218–1230.

Scafato, E., Gandin, C., Ghirini, S., Galluzzo, L., Rossi, A., Gruppo di lavoro CSDA (2010). Rapporti ISTISAN. Epidemiologia e monitoraggio alcol-correlato in Italia, Rapporto 2010, Istituto Superiore di Sanità.

Seo, H. S., Lee, Y., Yoon, Y. R., Song, J. M., Shin, J. M., Lee, S. Y., & Hwang, I. (2009). Impacts of sensory attributes and emotional responses on the hedonic ratings of odors in dairy products. *Appetite, 53*, 50–55.

Shifferstein, H. N. J. (2009). The drinking experience. Cup or content? *Food Quality and Preference, 20*, 268–276.

Smith, D. E., & Mitry, D. J. (2007). Cultural convergence. Consumer behavioral changes in European markets. *Journal of Wine Research, 18*(2), 107–112.

Spence, A., & Townsend, E. (2006). Implicit attitudes towards genetically modified (GM) foods. A comparison of context-free and context-dependent evaluations. *Appetite, 46*, 67–74.

Stead, M., Hasting, G., & McDermott, L. (2007). The meaning, effectiveness and future of social marketing. *Obesity Review, 8*, 189–193.

Stein, L. J., Nagai, H., Nakagawa, M., & Beauchamp, G. K. (2003). Effects of repeated exposure and health-related information on hedonic evaluation and acceptance of a bitter beverage. *Appetite, 40*, 119–129.

Thach, L. (2005). Millennial wine marketing. *Wine Business Monthly, 12*(12).

Thach, L., & Olsen, J. E. (2004). The search for new wine consumers. Marketing focus on consumer life style or life cycle. *International Journal of Wine Marketing, 16*, 44–57.

Thach, L., & Olsen, J. E. (2006). Market segment analysis to target young adult wine drinkers. *Agribusiness, 22*(3), 307–322.

Theodore, S. (2008). Beverage R&D. Banking on boomers, beverage industry. <www.bevindustry.com>. Posted 15.07.08.

Townsend, E., Clarke, D., & Travis, B. (2004). Effects of context and feelings on perceptions of genetically modified food. *Risk Analysis, 24*(5), 1369–1384.

Tucker, L. R. (1966). Some mathematical notes on three-mode factor analysis. *Psychometrika, 31*, 279–311.

Tudoran, A., Ottar Olsen, S., & Dopico, D. C. (2009). The effect of health benefit information on consumer health value, attitudes and intentions. *Appetite, 52*, 568–579.

Tur, J. A., Romaguera, D., & Pons, A. (2004). Food consumption patterns in a Mediterranean region. Does the Mediterranean diet still exist? *Annals of Nutrition and Metabolism, 48*(3), 193–201.

Verbeke, W. (2006). Functional foods. Consumer willingness to compromise on taste for health? *Food Quality and Preference, 17*, 126–131.

Verbeke, W., Scholderer, J., & Lahteenmaki, L. (2009). Consumer appeal of nutrition and health claims in three existing product concepts. *Appetite, 52*, 684–692.

Voller, F., Orsini, C., Berti, A. (2010). I consumi e le conseguenze dell'uso e abuso di alcol in cifre, ARS Toscana.

Wahl, S., Kriston, L., & Berner, M. (2010). Drinking before going out—A predictor of negative nightlife experiences in a German inner city area. *International Journal of Drug Policy, 21*, 251–254.

Wolburg, J. M., & Pokrywczynski, J. (2001). A psychographic analysis of Generation Y college students. *Journal of Advertising Research, 41*(5), 33–53.