Manuscript Details

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Title	Behavioural patterns in Mediterranean-style drinking: Generation Y preferences in alcoholic beverage consumption
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Abstract

The received wisdom is that patterns of alcohol consumption in Mediterranean countries are healthier than in northern European counterparts. However, recent surveys highlight the growing tendency by younger generations to change drinking-style. This increases the concern over adoption of unhealthy consumption behaviours that might be carried over in later age. What remains unexplored are the details of these emerging consumption patterns. The objective of this paper is to cast some light on these phenomena using stated choice data. This study quantitatively explores consumption contexts and links them to characteristics of young Italians. Data collected from a questionnaire completed by 556 respondents are used to estimate a Latent Class Model. Results reveal the existence of eight distinct consumption patterns, some of them far from the Mediterranean tradition. Socialization is the main motivation for alcohol consumption. Consumption of wine, the traditional Mediterranean drink, appears to be in the process of being re-discovered and re-appreciated.

Keywords	Generation Y; Mediterranean-style drinking; Alcoholic beverages consumption; Latent class modelling; Italy
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Response to Reviewers

Ms. Ref. No.: JBEE_2018_67

Title: Behavioural patterns in Mediterranean-style drinking: Generation Y preferences in alcoholic beverage consumption

June 5, 2018

We would like to thank the Reviewers for their constructive comments and recommendations. We think that as a consequence of the suggested changes the paper is much improved.

Please read below how we implemented each of them. We provide specific responses point-by-point. All amendments are highlighted in yellow in the manuscript file.

Reviewer #1

I found this paper interesting to read. I think the analysis and discussion are well executed.

Thank you very much for your appreciation.

My main comments relate to the introductory sections of the paper (up to pg 8). I would suggest shortening the introduction section of the paper. In this context it would be useful to reduce the number of graphs presented in the introductory section.

We reduced the number of graphs in the section, deleting Fig.1, 2 and 3.

I think as a motivation for the paper it would be useful to highlight more succinctly why this is an important research question (is it because of potential health/policy implications) and what the study adds to the current knowledge on drinking patterns beyond what is known in the national statistics.

Following the suggestion of the Reviewer, we better pointed out the gaps in previous research that our study intended to fill and highlighted the health policy implications emerging from our study (p. 4).

Reviewer #2

The paper is interesting and provides valuable insights into wine consumer segmentation studies of the generation Y. The authors managed the assigning of the respondents to the latent class and describing of the latent classes very well.

Thank you for the appreciation.

Does the social demographic structure of the study's reflect the real structure (generation Y) of the population in Verona?

We included in the manuscript that our sample is in line with the young population of Verona in terms of gender. However the sampling technique we adopted gives rise to a sample including more young students than the target population (p. 9).

I am wondering why the authors are not referring to the relevant studies in the section 'discussion'? Including the relevant literature references in the mentioned section is required.

We followed the suggestion of the Reviewer and cited the most relevant studies in the 'Discussion' section (pp. 15 and 16).

Behavioural patterns in Mediterranean-style drinking: Generation Y preferences in alcoholic beverage consumption

Highlights

- Eight drinking patterns emerge, some of them far from the Mediterranean tradition
- Risky patterns are more linked to youngest individuals and women
- Socialization is the main motivation for alcohol consumption
- Wine, the traditional drink in Mediterranean culture, is re-discovered and re-evaluated

Behavioural patterns in Mediterranean-style drinking: Generation Y preferences in alcoholic beverage consumption

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Abstract

The received wisdom is that patterns of alcohol consumption in Mediterranean countries are healthier than in northern European counterparts. However, recent surveys highlight the growing tendency by younger generations to change drinking-style. This increases the concern over adoption of unhealthy consumption behaviours that might be carried over in later age. What remains unexplored are the details of these emerging consumption patterns. The objective of this paper is to cast some light on these phenomena using stated choice data. This study quantitatively explores consumption contexts and links them to characteristics of young Italians. Data collected from a questionnaire completed by 556 respondents are used to estimate a Latent Class Model. Results reveal the existence of eight distinct consumption patterns, some of them far from the Mediterranean tradition. Socialization is the main motivation for alcohol consumption. Consumption of wine, the traditional Mediterranean drink, appears to be in the process of being re-discovered and re-appreciated.

Keywords: Generation Y, Mediterranean-style drinking, Alcoholic beverages consumption, Latent class modelling, Italy.

1. Introduction

Alcohol, together with caffeine and nicotine, may be considered a 'recreational drug' and, from this viewpoint, it represents the most widely consumed drug in the world (Ibáñez *et al.*, 2010). It is well-established in the literature that prolonged alcohol abuse has long-run negative effects on health. Because of habit formation, current behaviours by youths are likely to determine or influence future consumption patterns in society, with serious repercussions on socialized health care. This generates substantive interest amongst researchers, institutions, the media and society in general in seeking an improved understanding of determinants of alcohol drinking behaviours by members of young generations. Indeed, the identification and characterization of their consumptions and preferences' patterns are critical for the development of forward looking marketing and policy strategies. This is challenge for a complex and varied product category, such as that of alcoholic beverages, as they involve psychological, sociological, medical, cultural and economic factors (Calafat *et al.*, 2011; Duffy 2004; Kozak & Fought, 2011; Kuntsche *et al.*, 2004; Yannakoulia *et al.*, 2008).

Mediterranean countries have enjoyed a centuries-long cultural tradition of wine production. They have developed patterns of regular, yet moderate alcohol consumption, which is typically almost exclusively restricted to mealtimes and enjoyed with family and friends (Smith & Solgaard, 2000). For many years, these patterns of alcohol consumption have been associated with a relatively low risk of alcohol abuse. Such a model was often exemplified as an icon of healthy alcohol consumption (Díaz-Méndez & Gómez-Benito, 2010; Rimm & Ellison, 1995) and considered an integral part of a cultural, religious and ethnical heritage. It has also been supported by well-established social norms (Iontchev, 1998; Lolli *et al.*, 1958; Mäkelä *et al.*, 2006; Mouret *et al.*, 2013). These norms have often been credited with preventing young generations from adopting risky alcohol consumption behaviours that are instead more common in Northern Europe (Calafat *et al.*, 2011), where alcohol consumption often takes place without food and it is mostly based on beer and spirits.

Recent studies suggest that the consumption behaviour of alcoholic beverages by young Southern Europeans has gradually been changing towards unhealthy patterns. To what extent these changes are the outcome of a uniform cultural shift in Mediterranean society or the combined effect and coexistence of different drinking consumption patterns is an issue that remains unexplored (Beccaria & Prina, 2010). Scholars highlight the impact of contextual dimensions, such as

consumption company and venues, in shaping the new culture of drinking (Norman, 2011), but they have not yet analysed how these dimensions interact to affect emerging alcohol consumption patterns in Mediterranean countries.

This paper intends to contribute to the filling of these gaps in the literature by investigating the patterns of consumption of alcoholic beverages among Generation Y (those born between '77 and '95) in a Mediterranean country. Specifically, in a survey sample of young Italian consumers, we focus on the identification of consumption contexts, venues, types of company and beverages driving the difference across consumption patterns. Further, we relate these to the respondents' characteristics.

Protecting young people from excessive alcohol consumption is one of the priorities of the 'European Union strategy to support Member States in reducing alcohol related harm', along with informing, educating and raising awareness on the impact of harmful and hazardous alcohol consumption, and on appropriate consumption patterns (European Commission, 2006). The identification and characterization of Generation Y's alcohol consumption patterns become therefore critical for the development of efficient and effective policy interventions to prevent alcohol abuse and promote long term health.

The article is organised as follows. The next section show how alcoholic consumption patterns are changing in Mediterranean countries. Section 3 presents a review of studies that focused on drinking motivations and context dimensions influencing alcoholic beverages consumption. Research objectives are pointed out in Section 4. Section 5 explains the methodology, while Section 6 presents the results of the study that are then discussed in Section 7. Section 8 concludes the paper.

2. The changing alcoholic consumption pattern in Mediterranean countries

Alcoholic consumption patterns typical in Northern-European countries are becoming increasingly widespread across Mediterranean countries (Calafat *et al.*, 2011; Graziano *et al.*, 2012; Kuntsche *et al.*, 2004; Mitry & Smith, 2009). Some recent evidence of this trend in Italy is provided by the 2014 data in the official national statistics (Istat, 2015), which shows that Italians of the so-called "Generation Y[1]" have higher than average consumption of aperitifs and spirits while that of wine was seven percent lower than the national average.

[1] As stated by Lancaster and Stillman (2002), Generation Y is born between 1977 and 1995, Generation X is born

Figure 1 presents data on risky alcohol consumption across different Italian generations. In this context young generations emerge to be more likely to consume alcoholic beverages outside mealtime than the other generations. The pattern of abusive alcohol consumption changes with age. While older people have the tendency to exceed[2] the moderate daily dose, young generations are—instead—more prone to 'binge drinking'[3]. Although binge drinking is becoming more common among young people worldwide, it has developed only recently in Mediterranean countries (Kuntsche *et al.*, 2004).

[Figure 1 about here]

According to the literature, the phenomenon of binge drinking is related to the camaraderie and the pursuit of stress reduction. It has been shown to be positively correlated to alcoholism disorders in the family of origin (Courtney & Polich, 2009) and, at least in part, to the level of educational attainment; especially in Anglo-Saxon countries, where it is more common among those who attended universities and colleges (Huerta & Borgonovi, 2010).
Many other studies reveal another concerning phenomenon in Western countries: the convergence of alcohol consumption patterns across genders, as alcohol consumption by women, especially young ones, increased (Duarte & Molina, 2004; Kuntsche *et al.*, 2011; Roberts, 2012; Wicki *et al.*, 2010). The debate on the causes of such phenomenon is ongoing. While some researchers link this trend to the changing roles of women in society—women's emancipation and increased empowerment, as well as their growing participation in the labour force, with the associated lifestyles changes (Kuntsche *et al.*, 2011)—others argue against the existence of a correlation between higher gender equality and increased alcohol consumption by women (Järvinen *et al.*, 2014; Roberts, 2012).

3. Motivation to drink

Many studies regarding alcohol consumption are focused on motivational determinants. According to Cox and Klinger (1990), people drink to obtain positive effects or mitigate adverse

between 1965 and 1976, Baby Boomers between 1946 and 1964 and Traditionalists are born before 1946.
[2] That is, consuming more than two alcohol units/day for men and more than one unit/day for women and those older than 65 (Istat, 2015).
[3] Binge drinking consists in consuming six or more glasses of alcoholic beverages during a single consumption occasion (Istat, 2015).

circumstances. Furthermore, they can be motivated by internal rewards, like mood-elevating, or external rewards, such as social approval. On these assumptions, Cooper (1994) built the Drinking Motive Questionnaire Revised (DMQ-R) to measure the four main motivations that combine internal and external rewards: (*i*) enhancement motives, drinking to improve mood and well-being (positive internal); (*ii*) social motives, drinking to obtain social rewards (positive external); (*iii*) coping motives, drink to face negative emotions (negative internal); (*iv*) conformity motives, drinking to avoid rejection by the social reference group (negative external). Based on this model, Mazzardis *et al.* (2010) and Graziano *et al.* (2012) investigated the drinking motivations of young Italians. The coping motives emerge as related to risky consumption behaviours and—together with enhancement motives—are associated with increased alcohol consumption. According to Buonanno and Vanin (2013), the consumption motivations of young Italians are linked to both peers' behaviour and drink intensity of the original family.

Together with motivations, the drinking context emerges as a key driver of alcohol consumption (Mohr *et al.*, 2005; Norman, 2011). Bisogni *et al.* (2007) identified eight dimensions that characterise beverage consumption contexts when beverages are matched with food: food and drink types, location, time, activities, social settings, mental processes, physical condition, and recurrence. Mueller Loose and Jaeger (2012) applied the food choice kaleidoscope approach (Jaeger *et al.*, 2011), synthesising the contextual dimensions through the so-called 3Ps (product, place and people), to analyse beverage choice in different contexts. Beer emerged to be linked to meals in restaurants and pubs, friends' houses and family's houses. Wine is associated with the consumption of complex meals, in the same locations (excluding pubs) and with company not different from that of beer. However, the cultural relationship between beverage, food and social context emerged to play a key role only in wine consumption.

Concerning specifically young generations, the company of friends emerged to play a key role in influencing consumption patterns (Agnoli *et al.*, 2011; Ali & Dwyer, 2010). Furthermore, drinking in a group leads to more euphoric experiences than drinking alone (Ritchie, 2007; Wicki *et al.*, 2010). Alcohol consumption by young individuals is often linked to gatherings, parties in public places or in friends' homes during the weekend. Finally, alcohol consumption in social contexts tends to increase the quantity consumed (Courtney & Polich, 2009).

4. Objectives

Results reported in the extant literature suggests that contextual dimensions, such as type of company and location of consumption, become focal motivations for the new culture of drinking (Norman, 2011), but how context dimensions interact to shape the emerging alcohol consumption patterns in Mediterranean countries remains an unexplored issue.

This study aims to investigate such patterns among members of Generation Y in a Mediterranean country. This is done by focusing on consumption contexts and identifying venues, type of company and products driving the different consumption choices together with individual characteristics.

Specifically, this study systematically explores:

- the role of context dimensions in driving consumption;
- the prevailing consumption patterns;
- the changed role of wine, the alcoholic beverage dominating the traditional Mediterranean drinking style, in terms of its different consumption patterns, consumer typologies, and its relationship with other alcoholic beverages;
- the influence of socio-demographic, psychographic and behavioural characteristics of consumers on the adoption of the consumption patterns.

5. Material and Methods

5.1 The survey and the sample

This research uses data collected by means of a discrete choice experiment survey instrument (Louviere & Woodworth, 1983) administered to a sample of young consumers from Italy. Respondents were asked to evaluate a series of 13 choice tasks, and in each to select one among four hypothetical consumption scenarios (choice tasks) which varied on the basis of the venue, type of alcoholic beverage, company and price (attributes and their levels are highlighted in Table 1). Psychographic, behavioural and socio-demographic characteristics of respondents were also recorded.

Given the importance of the venue type in determining choice of food and beverage (Sester *et al.*, 2013), in our experimental design we used the four most frequent alcohol consumption venues for young people as alternatives: own home, restaurants, bars and discos. Four types of drink were

used: wine, beer, aperitif and spirits. The attribute 'company' included three levels: consumption with friends, with family relatives or alone.

[Table 1 about here]

Attributes and levels where allocated to choice tasks by using a Bayesian efficient experimental design, which minimised the expected D_b-error (Ferrini & Scarpa, 2007; Sándor & Wedel, 2001; Scarpa *et al.*, 2007) starting from some assumed parameter values. The experimental design consisted of 26 choice tasks, divided into two blocks of 13 each. Respondents were randomly assigned to either. Figure 2 shows an example of a choice task.

[Figure 2 about here]

A sample of young respondents from Verona, in Northern Italy, aged 16-32[4] was recruited in schools and universities and through social media snowball sampling. Verona is at the heart of one of the most renowned wine producing region in Italy, and it is linked to wine production and consumption by tradition, history and rural culture. Its population is composed by about 923 thousand of inhabitants (Istat, 2011), and it is mainly rural, with few metropolitan and multi-ethnic influences. It is still linked to local customs in alcohol consumption and it can be considered as an example of the Mediterranean consumption style of alcoholic beverages in Italy. Our final sample includes 556 respondents, with a non-completion rate of less than eight percent. Table 2 reports the sample characteristics. Overall, respondents have better than average education levels, and men and women are both well-represented, in line with Generation Y population in Verona (Istat, 2011). Given the sampling method of choice, the majority of respondents are younger than 25, have student status, and are mainly either single or engaged. Most still live with their parents, which is common in Italy for this age group (Istat, 2011).

[Table 2 about here]

[4] This age range was established considering the minimum age allowed for on-premise consumption of alcoholic beverages in Italy by law and the upper limit of Generation Y.

5.2 Modelling approach

The analysis of the observed choices is grounded in the conventional random utility theory framework (Thurstone, 1927) as implemented by logit modelling (McFadden, 1974). In this context, the utility function of respondent *n* for the alternative *i* in the choice task *t*, assumed to be linear and additive on parameters and attributes, can be expressed as:

$$U_{nit} = \beta' X_{nit} + \varepsilon_{nit} \quad (1)$$

where each alternative is characterized by the vector of attributes *X,* a conformable vector of preference parameters to be estimated, β, and the unobservable utility component ε independently and identically distributed Gumbel (Extreme Value Type I). The choice probability for alternative *i* to be selected in choice task *t* out of *J* alternatives faced by the respondent *n* is logit:

$$P_{nit} = \frac{\exp(\beta' X_{nit})}{\sum_{j=1}^{J} \exp(\beta' X_{njt})} \quad . \quad (2)$$

In this specification it is assumed that preferences are homogeneous across all individuals. In other words, 'respondents are preference clones'. While in many empirical cases this conceptually stringent assumption may hold—at least statistically—a growing number of empirical studies have shown it to be excessively restrictive from the behavioural viewpoint. Indeed, there is often strong evidence of heterogeneity in the preferences across individuals for one or more attributes (e.g. Hynes *et al.*, 2008). Everything else equal, some respondent might like more or less a given drink category, a form of company or a place of consumption than others do. The limitations of the logit model in accommodating such preference heterogeneity can be overcome by using the more flexible mixed logit models (Train, 2009). Such models are generally shown to significantly improve model fit (Hensher & Greene 2003; Rigby *et al.,* 2009; Train 1998), as well as provide greater insights into choice behaviour (McFadden & Train, 2000) and welfare change estimation (Scarpa *et al.*, 2008; Sillano & Ortúzar, 2005).

To achieve our study's objectives, a characterization of groups with a homogeneous patterns of behaviour is needed, therefore in our analysis we assume a discrete, rather than a continuous, mixing distribution to describe respondents' choices. This is typically referred to as the latent class (LC) analysis, because classes collecting respondents with similar underlying preferences are latent and revealed by their choices.

LC models are semi-parametric variants of the MNL model and implement finite mixing by means of a discrete multinomial distribution. This type of models is based on the assumption that respondents can be probabilistically assigned to a finite set of *C* classes on the basis of their observed pattern of choices. Each class is characterized by a unique class-specific vector of utility parameters β_c, for each of the attributes in the choice task. This means that, within classes, respondents are 'preference clones', but across classes the preference structure varies, often dramatically.

Given membership to a class *c*, the probability of the sequence of choices y_n over the *T* choice occasions is:

$$P(y_n|c,X_{nit}) = \prod_{t=1}^{T} \frac{\exp(\beta_c^{'} X_{nit})}{\sum_{j=1}^{J} \exp(\beta_c^{'} X_{njt})} \quad . \tag{3}$$

In this study, the panel is balanced and therefore *T* is the same (equal to 13) for *all* respondents, i.e., $y_n = \langle i_{n1} \,|\, ... \,|\, i_{nT} \rangle$. Membership probabilities for each latent class *c* are also defined according to the logit process as:

$$\pi_c = \frac{\exp(\alpha_c + \gamma_c^{'} Z_n)}{\sum_{c=1}^{C} \exp(\alpha_c + \gamma_c^{'} Z_n)} \tag{4}$$

where z_n is a vector of co-variates characterizing respondent *n*, and γ is the vector of associated parameters to be estimated, while α_c is a class-specific constant. In estimation, for identification purposes only *C*−1 sets of coefficients can be independently identified. For one arbitrary class *c* the vector γ_c and α_c are both set to zero for identification purposes. When significant, these characteristics provide important predictive and substantive information on the identification of taste segments.

From Equation 3 and 4 it is possible to retrieve the unconditional probability of respondent *n*'s sequence of choices y_n over the *T* choice occasions, which can be derived by taking the expectation over all the *C* classes, as:

$$P(y_n|\beta_c,X_{nit}) = \sum_{c=1}^{C} \pi_c \prod_{t=1}^{T} \frac{\exp(\beta_c^{'} X_{nit})}{\sum_{j=1}^{J} \exp(\beta_c^{'} X_{njt})} \quad . \tag{5}$$

The sample likelihood function to be maximised in our estimations is therefore:

$$L = \prod_{n=1}^{N}\left[\sum_{c=1}^{C}\pi_c \prod_{t=1}^{T}\prod_{i=1}^{I}\frac{y_{nit}\exp(\beta_c' X_{nit})}{\sum_{j=1}^{J}\exp(\beta_c' X_{njt})}\right] \quad (6)$$

where y_{nti} is an indicator equal 1 if the alternative $i \in I$ was selected by individual n in the choice occasion t among all other alternatives $j \in J$ and zero otherwise. Parameter estimates are obtained by maximizing the log of the sample-likelihood over the parameter space.

6. Results

Estimates of a logit model from the choice data are in Table 3 and they indicate that alcohol consumption at home and at the bar are not significantly different from each other and that they are preferred to consumption at the restaurant, which, in turn, is much preferred to consumption at the disco. This suggests that overall young Italian consumers are still attached to their cultural traditions in terms of the venues of consumption. The model further suggests that aperitif is the favourite alcoholic drink, but consumers' willingness to pay (WTP) for aperitif is only slightly higher (€0.34) than for wine. In turn, wine is still preferred to beer, and consumers are willing to pay €0.46 less for beer than for wine. The difference is even larger when wine is compared to spirits, for which results show a WTP of €1.74 less than for wine. Type of company is the most important motivator in the consumption of alcoholic beverages in this sample. As highlighted in other studies outside Italy (Courtney & Polich, 2009), the company of friends plays a paramount role: drinking with friends (our baseline) provides the highest utility compared to alcohol consumed in the company of only family relatives or alone.

[Table 3 about here]

As discussed, different consumption patterns, when they manifest themselves in choice sequences, can be uncovered by using Latent Class Models. However, model estimation does not automatically produce the optimal number of groups with homogeneous preferences. So, a search was conducted to identify the best number of classes consistent with the observed data. The range between 1-9 classes was explored, and the resulting data fit criteria are reported in Table 4. The corrected Akaike information criteria (McLachlan & Peel, 2000) indicate that eight classes are optimal. Adding covariates to the membership probabilities equations, including socio-

demographic characteristics (gender, age and household) and the self-reported consumption frequencies for the different alcoholic beverages, improves the fit of the model to the data. Table 5 shows the estimates of the best performing model with eight latent classes and socio-demographic and behavioural characteristics as covariates.

[Table 4 about here]

[Table 5 about here]

A common element across all classes is the highest utility perceived in drinking alcoholic beverages with friends, rather than alone or with family: unsurprisingly social drinking matters a lot and produces high utility. This is apparent in classes showing both new consumption patterns, where aggregation venues for young people, such as bars and discos, are favoured as well as those with traditional consumption venues. The latter are often associated with inherently healthier consumption because of the presence of food, such as restaurants or one's home (Rimm & Ellison, 1995). There is a clear indication that at least one segment of this sample of youth follows consumption habits that are far from the Mediterranean tradition: not always linked to consumption situations that encourage moderation, such as during mealtime with family, but much more linked to social events with friends outside the home.

Latent Class 1, which can be called *The Traditionalist*, with 16% probability of membership, expresses a purely traditional pattern of alcohol consumption. Those in this class prefer wine over other beverages, and feel that drinks in food-related venues (at home or in the restaurant) have a higher utility than drinks consumed in entertainment venues, such as bars and discos.

Latent Class 2, *The New Traditionalist* (13% probability), prefers a drink at home rather than at the bar, which in turn is preferred over consumption at the restaurant or disco. Despite leaning towards home consumption, this class seems to express a consumption pattern that differs from Mediterranean-style drinking for the choice of beverages. The preference of this class is for aperitifs and beer rather than wine, which is consumed only sporadically.

Latent Class 3, *The Northerner* (12% probability), prefers to consume alcoholic beverages at the bar, and shows a consumption pattern similar to that prevalent in northern Europe. In fact, this class favours the consumption of beverages with typically higher alcohol content than wine. Men

and younger people aged 16-24 are more likely to belong to this class, showing low consumption frequency of low-alcohol beverages such as beer and wine, and relatively high frequency of consumption of drinks with high alcohol content, such as aperitifs and spirits.

Respondents associated with latent Class 4, *The Mild Northerner* (12% probability), prefer to consume alcoholic beverages outside mealtime at the bar rather than at the disco and prefer to drink beer and aperitifs rather than wine or spirits. This class moves away from the Mediterranean traditional drinking style in terms of both the beverage preference and consumption venue.

Latent Class 5, *The Social Wine Discoverer* (3% probability), is associated with respondents who prefer drinking at the bar and derive the highest utility from the consumption of wine. This is a small class of young consumers who have rediscovered the 'virtues' of wine and consume it at venues for youth meetings, untying it from the traditional mealtime drink. Perhaps they consider this behaviour as 'trendy'. Those belonging to this class have a high probability of living alone or having already formed their own young family. In terms of frequency, they also tend to be frequent consumers of wine and only rarely do they consume beer.

Despite favouring drinking at the bar, as do those in class 5, those in Latent Class 6, *The Anything-but-wine* (13% probability), differ because they place wine at the bottom of their preference ranking, favouring any other alcoholic beverage. Younger members of Generation Y show higher probability of belonging to this class, whose members drink wine only rarely, favouring beer and spirits.

Latent Class 7, *The Wine Snob* (15% probability), shows a positive coefficient for the price variable (0.275), and prefers wine to other drinks. The interest of this class of consumers in wine takes a sort of 'posh' connotation receiving a higher utility from costly consumption contexts, probably because they are associated with high quality products and trendy places and people. Those with high probability to be in this class tend to be men who also drink aperitifs frequently.

Members of Latent Class 8, *The Deluded* (16% probability), tend to drink alcohol at home rather than at the bar and prefer wine. Some discrepancy arises when comparing their responses to choice tasks in the stated choice experiment with what they state in terms of their real consumption pattern. Their choices reflect a preference for wine while their self-reported consumption pattern reveal that they frequently drink aperitifs as well. Younger people who have low wine consumption and high aperitif and spirit consumption are more likely to be in this class.

Unexpectedly, a further element in common to all classes is the tendency not to drink at the disco, despite this is an important meeting and entertainment location for young people.

7. Discussion

Generation Y Italians offer a composite picture of different patterns of consumption. Some groups show an inclination towards potentially risky drinking patterns. The drinking behaviour of these groups is no longer aligned with the 'traditional' consumption behaviour typical of Mediterranean countries. They prefer to drink highly alcoholic beverages in contexts different from home and away from mealtime, adopting drinking styles more similar to the North European ones (Calafat *et al.*, 2011).

Membership probabilities to each Latent Class are found to vary according to the socio-demographic and behavioural characteristics of respondents. This class membership characterization can increase the understanding of the link between personal characteristics of young respondents and preferences of each latent class. It may hence give us an insight on different consumption patterns for alcoholic beverages.

Figure 3 displays class membership probabilities to highlight the differences in consumption patterns adopted by men (dark grey bars) and women (light grey bars). These are sorted by age groups at the time of the survey, from the youngest (aged 16 to 24 years, left hand side panel) to the oldest (25 to 32 years, right hand side panel) and by frequency of consumption of the different alcoholic beverages. All cases in the figure consider young people who still live with their parents, given the high percentage of the sample in this condition (81.3%).

[Figure 3 about here]

Frequent wine consumers tend to adopt the traditional consumption patterns expressed by LC1 *The Traditionalist*, and this is true for both men and women and for both younger and older consumers of Generation Y. They seem to have low exposure to risky consumption behaviours and more prone to follow Mediterranean-drinking styles (Mäkelä *et al.*, 2006; Mouret *et al.*, 2013). However, women of Generation Y, in both the young and old segments, have 20 percent probability of belonging to LC8 (*The Deluded*).

Major differences between both sexes and age groups emerge with regards to the frequency of beer consumption. The youngest of this generation are more likely to follow the consumption patterns of LC2 (*The New Traditionalist*) and LC6 (*The Anything-but-wine*), but men are more likely to belong to LC2 than to LC6. This implies women are more prone than men to the risky consumption pattern of LC6, with higher consumption of high alcohol beverages at times other than mealtimes, confirming the presence of change in behaviour across genders (Duarte & Molina, 2004; Kuntsche *et al.*, 2011; Roberts, 2012; Wicki *et al.*, 2010). Respondents in the oldest segment show a higher probability to adopt the consumption pattern of LC2, which is prone to a 'traditional-yet-modernized' consumption.

Differences emerge in terms of sex, with a lower probability for women to fall into this class (43%, compared with 56% for men), and twenty percent probability of belonging to LC8. Focusing on those who frequently consume aperitif also highlights differences for both sex and age levels. Younger men of Generation Y are likely to adopt either the consumption pattern of LC3 (*The Northerner*), preferring spirits and drinking outside meal consumption, or that in LC4 (*The Mild Northerner*), who are still a new yet lower risk consumption pattern. They prefer bar as a venue, and aperitifs and beer as drinks, and they express the lowest perceived utility for stronger liquors. Most young women are likely to fall either into this class, or in LC8, with lower levels of risk than men. However, women display a higher probability to follow the consumption pattern of LC6 than men. Turning our attention to the older members of the generation, men are distributed almost equally between LC4 and LC3, and women between LC8 and LC4.

Differences in the implied consumption patterns in gender and age also emerge for those who frequently consume liquors. The youngest members of Generation Y are more likely to belong to LC6, which is associated with a Northern-European consumption patterns. This is particularly true for women (63% of membership probability) than for men (55%), who display a 27 percent probability to be in LC3. This is also remarkable, since it has an associated consumption pattern of high alcoholic beverages outside mealtimes. The oldest segment of Generation Y has highest probability to belong to LC6, with the same predicted percentage for men and women.

Convergence across genders in alcohol consumption is confirmed by many studies in the literature (McPherson et al. 2004; Wilsnack et al., 2009, just to cite some of them), often with an inversion of roles, with female more prone to take risky behaviours, as predicted by Kuntsche et al. (2011). Altogether the data of this study show that potentially risky patterns are more linked to

the youngest segment of Generation Y and women are more likely to adopt this kind of patterns than men, and to consume high alcoholic beverages outside mealtimes.

8. Conclusion

Italian official national statistics covering the 1993-2012 period provide support to the hypothesis for alcohol consumption to have undergone a cultural shift, mostly involving young people. Moving from this fact we developed a survey-based choice experiment to explore the contemporary relationship between patterns and contexts of alcohol consumption. The resulting models and associated simulation scenarios produced some important insights into the likely changes in alcohol consumption which are worthwhile highlighting. Although our sample is not representative of the Italian youth, survey results illustrate the key role currently played by context in influencing alcohol consumption patterns. The underlying assumption is that in Mediterranean-style drinking, alcohol is mostly consumed by Italian youth in the form of wine, in moderation and during meals with family and friends. With respect to this baseline, the overall change seems to be due to a combination of factors. On one hand, socialization seems to constitute the main motivation for alcohol consumption, confirming results by Mazzardis *et al.* (2010). On the other hand, it is also a fundamental determinant of the mode and context of consumption. Socialising with friends and peers emerges as more important than the type of alcoholic beverage itself in determining the consumption context, as it is associated with the highest WTP.

Specifically, eight consumption patterns clearly emerged, also determined by socio-demographic and consumption characteristics of this young cohort. They range from the typical Mediterranean-style consumption pattern (LC1), to consumption patterns which used to be either very rare in (or even alien to) the Italian drinking custom, but have long been more common in northern Europe. Women and the youngest members of Generation Y are those most likely to adopt these new patterns in which they prefer to consume high alcohol content beverages or beer outside mealtime at the bar (LC3 and LC6).

Wine, the traditional alcoholic beverage in Mediterranean culture, has a dual role in surveyed Generation Y, as highlighted by Marinelli *et al.* (2014). For some groups it is related to convivial consumption contexts that are part of the tradition, namely those associated with mealtime, when drinking wine is aimed at enhancing the taste of food. Its consumption, however, has in part

changed. It is less of an everyday family-based event, as dictated by the traditions and more frequently a catalyst for socialization with friends (Beccaria & Prina, 2010). For others wine is undergoing a form of re-discovery and re-evaluation in consumption venues, such as the bar. So, traditional Mediterranean-style drinking might be for most youth on its way out and it is being replaced by a much more articulated pattern. What worries about the new pattern is that it might constitute the back door for habit formation with negative health consequences in later years. Future research developments may want to extend this investigation to other Mediterranean areas and use better sampling strategies to confirm our findings, and explore the issue in Northern European countries, to make a comparison across the different drinking styles. We also feel an extension is needed to the analysis of the psychological sphere to account for whatever features of relevance are prevailing in Generation Y. Psychological factors could be used as an important motivation for responsible versus risky alcohol consumption patterns.

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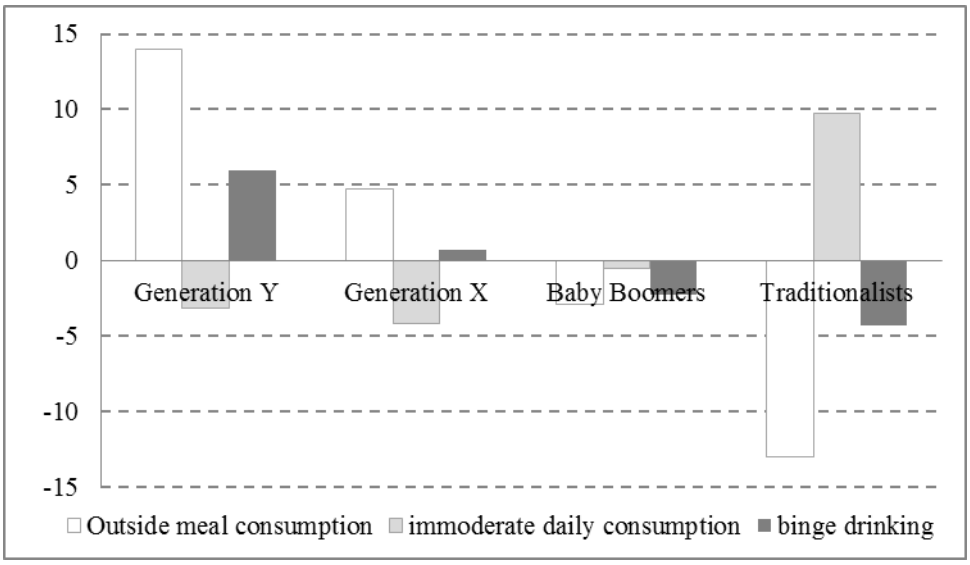
Figures

Fig. 1. Risky consumption behaviour of alcoholic beverages in Italian generations, 2014 (percentages expressed as deviation from the population mean).

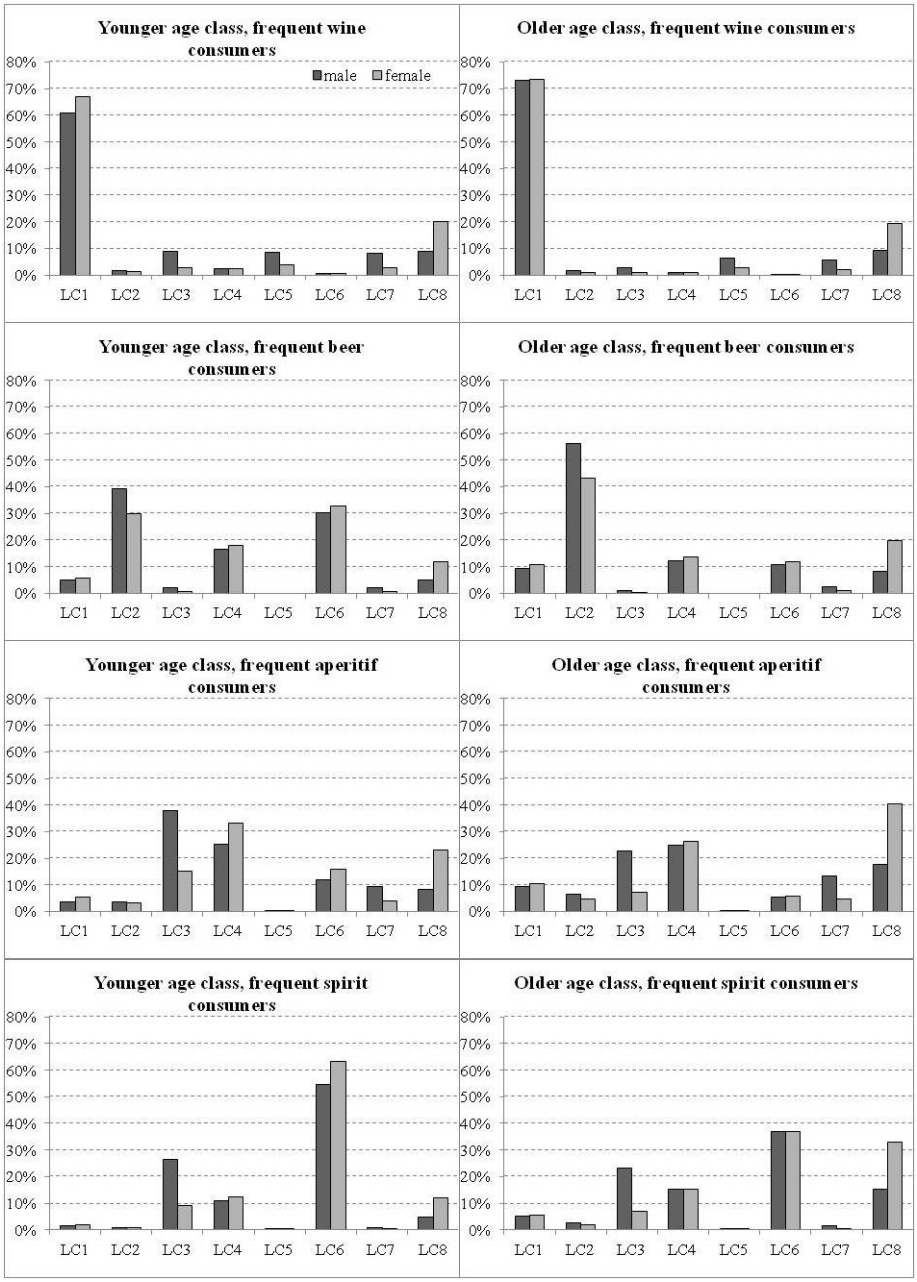


Source: our elaboration from Istat data (2015).

Fig. 2. An example of choice task.

Choice set 1 of 13				
I'm:	at home	to the restaurant	to the bar	in disco
I'm drinking:	spirit	aperitif	aperitif	wine
I'm:	alone	with family	with friends	with friends
I pay:	3 €	10 €	10 €	15 €
I prefer:	□	□	□	□

Fig. 3. Class membership probabilities by gender, age class and consumption frequencies for respondents living with parents.



TABLES

Table 1

Alternatives, attributes and levels of the experimental design.

Context dimensions	Design elements	Levels
Venue	Alternative	Home
		Restaurant
		Bar
		Disco
Product	Attribute	Wine
		Beer
		Aperitif
		Spirit
People	Attribute	Friends
		Family
		Alone
Price	Attribute	3, 6, 9, 12 euro at home
		5, 10, 15 euro in the other venues

Table 2

Socio-demographic characteristics of the sample (n=556).

Characteristics	Levels	Observations	Percentage
Gender	Female	326	58.6
	Male	230	41.4
Age	16-24 (Young segment of Generation Y)	379	68.2
	25-32 (Old segment of Generation Y)	177	31.8
Education level	Junior High School	59	10.6
	Technical Schools	27	4.9
	High School/Secondary School	349	62.8
	University/College	121	21.8
Occupation	Student	303	54.5
	Employee	141	25.4
	Worker	48	8.6
	Freelance/Manager	32	5.8
	Unemployed	10	1.8
	Other	22	4.0
Marital status	Single	276	49.6
	Engaged	258	46.4
	Married	22	4.0
Household	Live with parents	452	81.3
	Live with the partner	47	8.5
	Live alone	32	5.8
	Live with friends	16	2.9
	Other	9	1.6

Table 3

Role of context dimensions in determining consumer utility estimated through the application of a Multinomial Logit Model (n=556).

Context dimensions	Coefficient estimates	SE	WTP (euro)
Venue			
ASC Bar (reference)			
ASC Home	0.014	0.038	
ASC Disco	−0.770 ***	0.041	
ASC Restaurant	−0.110 ***	0.039	
Product			
Wine (reference)			
Aperitif	0.094 **	0.043	0.34
Beer	−0.124 ***	0.038	−0.46
Spirit	−0.472 ***	0.040	−1.74
People			
With friends (reference)			
With family	−1.120 ***	0.044	−4.12
Alone	−1.440 ***	0.043	−5.29
Price	−0.272 ***	0.017	

Note: **$p<.05$; ***$p<.01$; SE = standard error

Table 4

Data fit criteria for alternative Latent Class Models (556 respondents, 7,228 Observations, T=13).

Model	*K*	Final ln*L*	ρ^2	BIC	crAIC
Multinomial Logit	9	-8,575.61	0.143	17,231.20	17,169.50
2-class	19	-8,282.99	0.171	16,734.81	16,606.19
3-class	29	-8,127.83	0.186	16,513.34	16,321.15
4-class	39	-8,035.14	0.194	16,416.82	16,166.08
5-class	49	-7,966.04	0.200	16,367.48	16,064.90
6-class	59	-7,904.74	0.205	16,333.73	15,987.74
7-class	69	-7,859.57	0.209	16,332.25	15,952.96
8-class	79	-7,815.22	0.212	16,332.41	***15,931.69***
9-class	89	-7,774.86	0.215	16,340.56	15,931.98
8-class with covariates	128	-7,650.94	0.224	16,439.25	16,162.71

Table 5

Coefficient estimates of context dimensions and covariates for the eight latent classes.

	LC1 The Traditionalist	LC2 The New Traditionalist	LC3 The Northerner	LC4 The Mild Northerner	LC5 The Social Wine Discoverer	LC6 The Anything-but-wine	LC7 The Wine Snob	LC8 The Deluded
Size (n=556)	16%	13%	12%	12%	3%	13%	15%	16%
Venue								
ASC Bar (reference)								
ASC Home	0.567***	0.419***	-0.756***	0.148	-0.880**	-0.875***	-0.520***	0.681***
	(0.137)	(0.135)	(0.181)	(0.191)	(0.388)	(0.158)	(0.148)	(0.149)
ASC Disco	-2.120***	-1.520***	-0.776***	-2.030***	-2.640***	-0.046	-0.769***	-0.275
	(0.257)	(0.190)	(0.138)	(0.324)	(0.490)	(0.120)	(0.147)	(0.200)
ASC Restaurant	0.405***	-0.243*	-0.604***	-0.149	0.519	-0.648***	-0.209	-0.055
	(0.143)	(0.143)	(0.175)	(0.173)	(0.420)	(0.148)	(0.133)	(0.152)
Product								
Wine (reference)								
Beer	-1.070***	1.370***	-1.030***	0.743***	-4.770***	1.680***	-0.164	-0.977***
	(0.130)	(0.202)	(0.180)	(0.216)	(0.596)	(0.229)	(0.191)	(0.227)
Aperitif	-1.060***	0.614***	0.250	0.995***	-2.490***	1.990***	-0.334**	-0.012
	(0.150)	(0.173)	(0.183)	(0.283)	(0.466)	(0.259)	(0.171)	(0.238)
Spirit	-2.590***	-0.270	0.333**	-0.988***	-4.700***	1.410***	-0.610***	-0.550**
	(0.306)	(0.195)	(0.151)	(0.256)	(0.655)	(0.221)	(0.160)	(0.282)
People								
Friends (reference)								
Family	-0.729***	-1.450***	-1.110***	-1.370***	-1.080**	-1.520***	-1.820***	-1.550***
	(0.118)	(0.182)	(0.243)	(0.185)	(0.465)	(0.177)	(0.211)	(0.229)
Alone	-1.740***	-0.974***	-0.428**	-4.370***	0.321	-2.130***	-2.170***	-2.090***
	(0.174)	(0.176)	(0.160)	(0.484)	(0.458)	(0.168)	(0.262)	(0.286)
Price	-0.401***	-0.769***	-0.141	-0.291***	-0.060	-0.062	0.275***	-0.897***
	(0.072)	(0.086)	(0.093)	(0.082)	(0.197)	(0.077)	(0.072)	(0.080)
Class membership model								
Constant[a]		-1.060	-1.070	1.010	-10.000	0.288	-3.300**	0.474
Male		0.416	1.260**	0.067	0.926	0.064	1.160**	-0.709
Live with parents		-0.287	0.057	-0.517	-1.830**	0.017	0.595	0.015
Upper age class (25-32)		-0.270	-1.410**	-0.919	-0.449	-1.660**	-0.545	-0.132
Frequent[b] wine consumer		-2.710***	-2.160***	-3.850***	8.930***	-5.270***	-0.451	-1.700**
Frequent beer consumer		3.010***	-1.160**	0.656	-1.970**	1.450**	0.726	0.252
Frequent aperitif consumer		0.844*	2.060***	1.340**	1.230	0.781	2.460***	0.990**
Frequent spirit consumer		0.515	2.660***	1.450**	0.677	3.260***	0.847	1.430**

Note: LC= Latent Class; * $p<.10$; ** $p<.05$; *** $p<.01$; standard errors are in parenthesis

[a] baseline refers to female, not living with parents, lower age class, non-frequent alcoholic beverages consumer.

[b] the term 'frequent' for different alcoholic beverages includes young people who consume them with a frequency varying from twice a week to daily.