Consumers' perception of Prosecco wine packaging: A pilot study in Padua and Milan

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Abstract

This paper aims to illustrate and discuss the importance of packaging attributes in the wine market. A survey was conducted in the north of Italy to assess how different attributes affect the probability of choosing a bottle of Prosecco wine. Two hundred face-to-face interviews based on a structured questionnaire were administered in Milan and Padua supermarkets to elicit preferences. Each respondent ranked three new bottles of Prosecco wine and expressed the importance of different packaging characteristics in its choice. Product attributes include Label's form, Label's colours, the Label in its entirety, the Writing "Prosecco", the Band on the bottle's neck and the Bottle's shape. The interviews allowed us to recognise the bottle customers found the most attractive, and rank-ordered logistic regression was able to disentangle which packaging characteristic led to their decision.

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Introduction

Nowadays, packaging is more than a way to protect a product and preserve its functions and characteristics. As a matter of fact, a package's look is the first thing attracting customers. On the one hand, well-designed packaging can arouse the customer's feelings inducing new desires that the product can satisfy. On the other hand, a product package can reassure customers by visually transmitting consistency with the values customers are looking for in their purchases (Rigaux-Bricmont, 1982; Underwood & Klein, 2002; Underwood, 2003; Wells *et al.*, 2007). Finally, good packaging can help a product be more recognisable in the market, and it has an ever more strategic relevance in an ever more competitive economy (Rundh, 2009; Silayoi & Speece, 2004).

Packaging can visually synthesise and communicate important products and manufacturers' values that could hardly be transmitted in other ways. It also can help customers to choose among a variety of food items that appear similar. Attractive shape and colours are key factors to communicate the product to customers (Grossman & Wisenblit, 1999; Silayoi & Speece, 2004; Delgado *et al.*, 2013; Kumar, 2017). Furthermore, the combination of colours and graphic elements can convey the manufacturer's values, creating a bond with the customer and strengthening the loyalty to the brand.

How the package looks, thus, is an important way to attract customers. Producers can focus on innovation so that when the consumer sees a product with new colours and shape, he/she is attracted to know what it is, or he/she can easily recognise the product they are looking for (Silayoi & Speece, 2004). Additionally, information on the backside helps customers: i) to find information related to the type of product, the raw materials, the plantation and production methods, nutritional facts, expiration date, conservation and use, disposal, ii) to decide, iii) to buy the item if he/she does not find something else more attractive.

Based on these considerations, the packaging is an essential marketing tool to convince customers to buy a product (Rettie & Brewer, 2000) and make a brand, allowing it to stand out against its competitors. The packaging can harness different strategic elements to strengthen visibility and product awareness, such as symbols, colours and labels, influencing customers' attitudes and decision-making and what a brand does (Raghubir & Greenleaf, 2006; Rundh, 2009). Therefore, the packaging is essential in product choice. For this reason, one of the most important goals should be to predict customers' tastes and create specially-made packaging.

What are the essential and most effective graphic elements for customers? We administered a survey to answer this question: which graphic elements in wine packaging influence customers in their decision to buy and the values they associated with colours and labels.

We performed a pilot study based on a face-to-face questionnaire and on a preference ranking experiment in which wine consumers compare three new bottles of Prosecco wine of the same brand. Preference data are analysed using the Rank Ordered Logit model (ROL), a generalisation of the well-known Conditional Logistic Regression (Mc Fadden, 1974) based on the Random Utility theory. This paper illustrates the results of our research and is organised as follows: the first section contains the most important literature about wine packaging; the second one reports the method, describing the survey and the econometric model used to explain which packaging attributes are determinant in customers' choice; the third section contains the sample description and the econometric analysis; in the final section conclusions are drawn.

1. Background

Product purchasing decisions can be characterised by irrational, intuitive, affective and heuristic processes. The buying behaviour of wine is a complex process where the grape variety, brand name, price and region of origin are the most important informational items (extrinsic cues) for consumers used to assess wine products before purchase (Lockshin *et al.*, 2006; Goodman, 2009; Williamson *et al.*, 2016; Thomas & Pickering, 2003; Nunes *et al.*, 2016). Russo & Marin (2016) add awards won in the competitions or assigned by the guides of the sector; also aesthetics or font of the label are among the factors/strategies that allow consumers to understand the complex world of wine by facilitating their approach and appreciation (Boudreaux & Palmer, 2007; Orth & Malkewitz, 2008; Sherman & Tuten, 2011).

The **price** influences the purchase convenience and quality perception; however, its importance changes with the consumer's level of knowledge and information, purchasing power, and involvement (Thach & Olsen, 2015; Russo & Marin, 2016). In purchasing decisions, the price can mainly assume two opposite roles: a positive role and a driver for the choice, when the price is considered a proxy of the quality or prestige of the product; a negative role when it becomes the central element of purchasing choices. In this case, the consumer considers the price too expensive or a disadvantageous quality/price ratio.

For consumer choices, wine **quality** has become a fundamental element, especially in recent years. It is a forced-choice for producers since the recovery of competitiveness on the productivity or production costs side is often limited. This fact has important consequences on marketing since it involves functions/elements aimed at the definition of the wine quality attributes, its communication, identifying the target, and choosing

commercial channels. Quality has an increasingly important role in influencing the strategic and organisational decisions of all the operators participating in the wine production chain. It is transversal to the production process and regards the grape, its transformation, the wine's packaging, up to the consumption stage (Pomarici *et al.*, 2017). It is necessary to underline that the perceived quality is subjective because each consumer elaborates their own expectations on the quality, using the attributes and making purchasing decisions based on needs, situations and values.

Also the **packaging** is an important marketing tool for wineries and attributes like the bottle shape, the glass colour, and label drawing should attract the attention of the potential purchaser (Rocchi & Stefani, 2006; Corduas *et al.*, 2013; Sáenz-Navajas *et al.*, 2013; Kelley *et al.*, 2015; Celhay & Remaudb, 2018). Most consumers will consider the package as a direct reflection of the product's quality (Chaney, 2000). Sáenz-Navajas *et al.* (2013) show an important trade-off in quality perception among different extrinsic cues.

The front label is the first mean of communication to attract the consumer, and it is therefore very important that the characteristics appearing on the label are visually attractive to stand out on the retail shelf. Barber *et al.* (2006) determined that the country of origin in the front label cue is the most important attribute when purchasing wine, followed by the back label cues, the wine style, and the wine description. Other significant attributes are represented by the front label cues of the wine vintage and brand name. As regards bottle packaging, respondents ranked cork seals as an indication of quality. Respondents overall considered bottle closure to be significantly more important compared to bottle shape and colour. The back label has been identified as an under-utilised area for providing information. Furthermore, consumers perceive the back label as one of the primary sources to make a purchasing decision and as a mean of increasing general product knowledge (Charters *et al.*, 1999).

On the contrary, a cross-country comparison of the most important wine choice drivers in the retail sector (Goodman, 2009) showed that having an attractive front label is one of the least important elements consumers consider when choosing a wine.

Boudreaux and Palmer (2007) discovered that the illustration used on the label, colour and layout, had the greatest effect on the American consumers' choice. Warm colours (red, orange) and neutral colours (white, black) positively affected purchase intent. Also, Galati *et al.* (2018), considering Italian red wines sold in the Chinese market, find a significant premium price for label characteristics, particularly for clean and artistic graphic styles. In comparison, a significant price discount has been observed for warm colours. Orth & Malkewitz (2008) examined the associations consumers have with

different holistic packaging designs and found that natural and delicate wine designs were perceived as higher quality, while massive and contrasting designs were associated with being inexpensive.

Laeng *et al.* (2016), using the eye-tracking method during the observation of wine labels, find that consumers prefer wine bottles with label characterised by pictorial elements rather than verbal information.

Another interesting topic is related to fun in the wine label (Lunardo & Rickard, 2019). These authors demonstrate that when consumers face a wine label that incorporates a high degree of fun elements, they perceive the label as less reassuring, leading to decreased perceived quality, and ultimately exhibit lower willingness to pay and purchase intentions.

Consumers' preferences depend on experience, and older frequent wine consumers were influenced most strongly by brand and packaging (Mueller & Szolnoki, 2010), but companies acknowledge that the package is as important as the product to a new generation of consumers. Batt & Dean (2000) noted that modern, innovative and distinctive labels were more attractive to the younger market than the older market, which preferred more traditional styles of packaging.

Some Authors found differences in behaviours and attitudes (Barber *et al.*, 2009; Thach, 2012), indicating that men and women may share different references relative to wine and, therefore, could interpret labels' design differently. Thomas and Pickering (2003) found that colours, images/pictures, and logo used in wine packaging are ranked higher by females as important considerations when deciding on wine purchase. Women have emerged as a new niche market in the wine industry, and wine marketers create products that appeal directly to the female market with such labels as mad housewife and seduction (George, 2005). Barber *et al.* (2006) found that women were not more likely than men to purchase a bottle of wine based on the overall label and bottle packaging or the front label design. However, females found that front label image, picture and logo, and label colours were significant in their decision to purchase a bottle of wine as compared to males. The closure types were significant to the female respondents' choice of wine with wax seals considered an indication of freshness and foil coverings as an indication of quality (Barber *et al.*, 2006).

2. Materials and methods

2.1. *Survey*

Our experiment compared three new bottles of Prosecco wine of the same brand. In particular, we realised some face-to-face interviews based on a

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structured questionnaire with the PAPI (Paper Assisted Personal Interview) system to compare three different packagings of a Prosecco wine bottle and understand why people prefer one over another.

The interviews were conducted from 9 am to 7 pm on Tuesday in two supermarkets in two different cities in Northern Italy: in the suburb of Padua and the centre of Milan. We decided to use two cities because of their different kinds of customers and of their relation with Prosecco wine: in Padua, Prosecco wine is extremely popular and people use it more often than in other cities around Italy; in Milan, Prosecco wine is well-known, but customers perceive it more as appropriate for parties or events and recognise it more as a niche product.

To be eligible, the interviewees must be regular wine drinkers (that is, drink wine at least once a week) and are in charge of wine purchase in the household. We administered about 100 interviews in each supermarket, with just over 200 customers involved in total. The sample selection was based on socio-demographic characteristics, such as gender, age, educational qualification, wine consumption and purchase, to adhere to pre-defined gender and age quota. The distribution of people who drink wine at least once a week and are household buyers is unknown. However, we know that men and older people mainly drink wine, while female and more mature persons are buyers in the household (Table 1). Hence the unknown joint distribution should seem to demographic distribution by gender and age groups, but older persons weight more than youngers. For these reasons, our sample starts from 25-year-old and slightly oversamples older groups compared to the general population demographic distribution. Despite being based on quota, our sample should be described as a "convenience sample" selected by a "mall intercept" method; thus, selection bias is very likely. Therefore, the results of this study cannot be used to make inference on the population.

During the interviews, we showed the respondents three different bottles of the same wine and brand with different packaging (Figure 1) that they had never seen before and asked customers to rank them starting from the favourite one. Then we asked them to say, on a four-point Likert scale (unimportant, slightly important, quite important, very important), the importance of some characteristics of the packaging in their choice: Label's form, Label's colours, the Label in its entirety, the Writing "Prosecco", the Band on the bottle's neck and the Bottle's shape. In this way, we can explore the main motivations which drove interviewees to choose a particular bottle.

Table 1 - Socio-demographics distribution by gender and age groups (per cent)

Age	Wine consumers		Household Buyers		Target demographics		Actual sample	
	Female	Male	Female	Male	Female	Male	Female	Male
25-44	17,9	29,4	26,6	14,9	24,6	24,1	24,6	21,2
45-64	20,1	32,7	35,9	22,6	27,1	24,3	31,8	22,4

Source: our elaborations on Istat data ('Aspetti della vita quotidiana' and demographic statistics).

Figure 1 - Three shown bottles

2.2. *Rank-ordered logit model*

As well point out by Le *et al.* (2020), empirical studies on consumers' preference often rely on survey data, in which respondents are asked to indicate their preference over a set of choices. Generally, in such surveys, the respondents show the most preferred choice. This setting will lead to a logit/probit model if there are only two choices in the choice set and a multinomial logit (MNL)/multinomial probit (MNP) model if the choice set contains more than two choices. Instead, in our setup, respondents are asked to rank the whole choice set from the most preferred to the least preferred. Then, the data is said to be in the form of rank-ordered data. In this case, the rank-ordered logit ("ROL") model must be used, which contains more

information about respondents' preference compared to the traditional logit/ probit data.

ROL is not widely used, perhaps due to the complexity of the underlying consumer choice process based on asking individuals to rank rather than rate a set of items according to some criteria. Concerning agri-food sector studies, this model was used in a few cases. In particular, Myung *et al.* (2008) used the ROL model to understanding attributes that contribute to consumer meal choice decisions within a *prix fixe* menu. The study respondents were given four pre-selected meal choice combinations (bundles) and asked to rank these given meal choice options in order of preference. A more recent study (Øvrum *et al.*, 2012) considered this model for a choice experiment on semi-hard cheese from Norway to estimate the effect of health information on diet choices. Costanigro *et al.* (2014) investigated perceptions on sulfites and willingness to pay for no-sulfite wines based on a rank-ordered logit estimation of best-worst choices. Another interesting paper based on ROL was proposed by Le *et al.* (2020); these authors empirically investigated the role of indicators and cues considered by consumers when purchasing safe vegetables. Canavari *et al.* (2018) used this model to investigate Italian consumer preferences for dry-aged pork loin and other relevant meat attributes and to evaluate the effect of information on consumer preferences.

In the economic literature, ROL was proposed by Beggs *et al.* (1981) and further developed by Hausman and Ruud (1987). The model was independently formulated by marketing researchers (Punj & Staelin, 1978; Chapman & Staelin, 1982) who called it "Exploded logit model" because the model coefficients are estimated using data in long shape which sample size is N*J, where N and J are respectively the number of respondents and the dimension of the choice set.

ROL generalises the well-known Conditional Logistic (CL) model (Mc Fadden, 1974) and is based on the Random Utility theory.

The main difference between ROL and CL (Conditional Logit model) is that the latter deals with choosing one option among unordered alternatives, while the former deals with an individual's ranking set of options. Schematically, the ROL model assumes that the respondent performs the ranking as follows: at the first step, 1 item (respondent's favourite) is chosen from the full set of options available and ranked first; then, the next favourite from the remaining items is chosen and ranked second, and so on; the item selection continues until some limit, fixed a priori, is reached.

Let U_{ij} the utility function of the individual i for the alternative $j = 1$, $2, \dots J,$ where J represents the number of all the different and exclusive alternatives.

According to the RUM - Random Utility Model (Luce, 1959; McFadden, 1974; Allison Christakis, 1994), the individual's utility U_{ij} is the sum of a systematic component μ_{ij} and a random component ϵ_{ij}:

$$U_{ij} = \mu_{ij} + \epsilon_{ij}$$

μ_{ij} is the so-called deterministic component and reflects the population's representative tastes, while ϵ_{ij} is the stochastic component and represents the idiosyncrasies of the individual i for the alternative j.

The functional form of the deterministic part of the Utility function is a linear specification:

$$\mu_{ij} = \beta_j x_i + \gamma z_i + \theta w_{ij}$$

where: x_i is a column vector of variables that describe respondents but do not vary across different items with a generic coefficient β_j; z_i is a column vector of variables that vary across the attributes but are the same for all respondents with a specific coefficients γ; w_{ij} is a column vector of variables describing a relationship among the items and the respondent with specific coefficient θ.

If $\theta = \gamma = 0$, the ROL collapses to a Multinomial Logit model, while if $\theta = 0$ and β and $\gamma \neq 0$, ROL collapses to the McFadden's Conditional Logistic model.

The respondent i will give a better rank to alternative m than alternative j if $U_{im} > U_{ij}$.

Formally[1]:

$$U_m - U_j = (\mu_m - \mu_j) + (\epsilon_m - \epsilon_j) > 0$$

Alternative m will be ranked as the most preferred among the full choice set, if and only if, for $\forall\ m \neq j$, $U_m > U_j$, so that we have the following J-1 equations:

$$U_m - U_1 = (\mu_m - \mu_1) + (\epsilon_m - \epsilon_1) > 0$$
$$U_m - U_2 = (\mu_m - \mu_2) + (\epsilon_m - \epsilon_2) > 0$$
$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots$$
$$U_m - U_J = (\mu_m - \mu_J) + (\epsilon_m - \epsilon_J) > 0$$

Alternatively, the $J - 1$ conditions can be rewritten in the following manner:

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1. For sake of simplicity we'll omit the individual index.

$$\epsilon_1 < (\mu_m - \mu_1) + \epsilon_m$$
$$\epsilon_2 < (\mu_m - \mu_2) + \epsilon_m$$
$$\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots$$
$$\epsilon_J < (\mu_m - \mu_J) + \epsilon_m$$

So we can define the probability of choosing alternative m as the Cumulative Probability Function of $J - 1$ error terms:

$$P(m|\epsilon_m) = P(U_m > U_1, \dots U_m > U_J)$$

If we assume for the error terms Independence, Gumbel distribution and Identical distribution, it is possible to show that the probabilities have very simple, closed forms, which correspond to the logit transformation of the deterministic part of the utility (McFadden, 1974).

If we assume that the most preferred is item $j = 1$, the probability can be written in the multinomial logit form:

$$P(1|\epsilon_1) = \frac{\exp(\mu_1)}{\exp(\mu_1) + \exp(\mu_2) + \dots + \exp(\mu_J)}$$

The coefficients of the ROL are estimated using maximum likelihood.

More generally, we can define the following likelihood for the single respondent i (Allison and Christakis, 1994):

$$L_i = \prod_{j=1}^{J} \frac{\exp(\mu_{ij})}{\sum_{k=1}^{J} \delta_{ijk} \exp(\mu_{ik})}$$

where $\delta_{ijk} = 1$ if $U_{ik} > U_{ij}$ and 0 otherwise.

For a sample of n respondents, the log-likelihood is given from the following formula:

$$logL = \sum_{i=1}^{n} \sum_{j=1}^{J_i} \mu_{ij} - \sum_{i=1}^{n} \sum_{j=1}^{J_i} log \left[\sum_{k=1}^{J_i} \delta_{ijk} \exp(\mu_{ik}) \right]$$

One of the β_j must be set equal to 0 to achieve identification. The choice of the reference item is arbitrary (Allison & Christakis, 1994). Coefficients represent marginal utilities, which are not interpretable because the utility is ordinal. However, ratios of coefficients are marginal rates of substitution, which are interpretable. They express the direction and weight of the

attributes. Thus β_{kj} is the effect of x_k (*k-th* variable) on the log odds of choosing alternative *j* over the base category. If $\beta_{kj} > 0$, increasing the *k-th* variable, the respondent assigns a higher utility to item *j* than the reference item.
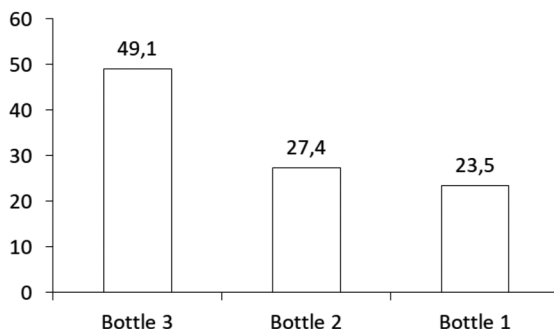
3. Results and discussion

3.1. *Sample characteristics*

The explorative analysis (Annex 1) shows that the sample is composed of women (56.4%), mainly aged over 55 (36.3%), followed by 35-44-year-old (22.9%) together with 25-34 (22.9%) and in the end 45-54 group (17.9%). Concerning the educational level, 44.1% holds a secondary school diploma, while 40.8% holds a bachelors degree. In detail, 26.3% consumes wine every day and 36.9% more than once a week, but only 28.5% drinks Prosecco wine during meals. Most interviewees drink Prosecco wine as an aperitif (54.2%) or during parties (63.1%, total exceed 100% because the habit of consuming Prosecco wine is a multi-response question: people could use Prosecco wine in different ways): 86.6% bought a bottle of wine in the last month; 55.3% bought a bottle of Prosecco wine in the same period; 38.9% spends less than five euros when buying Prosecco wine at super/hypermarket and 31.8% between five and six euros. Finally, the main reason to buy Prosecco wine is as a present or to use it on special occasions (71.5%).
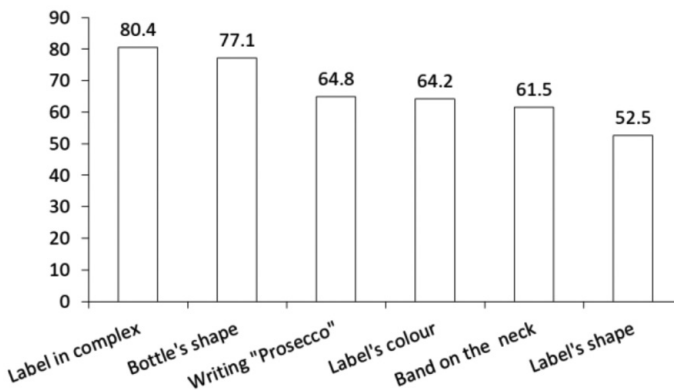
Almost half of the involved customers concentrated their choice on bottle number three (49.1%, Figure 2). The other two received about one-quarter of the preferences (23.5% the first one and 27.4% the second).

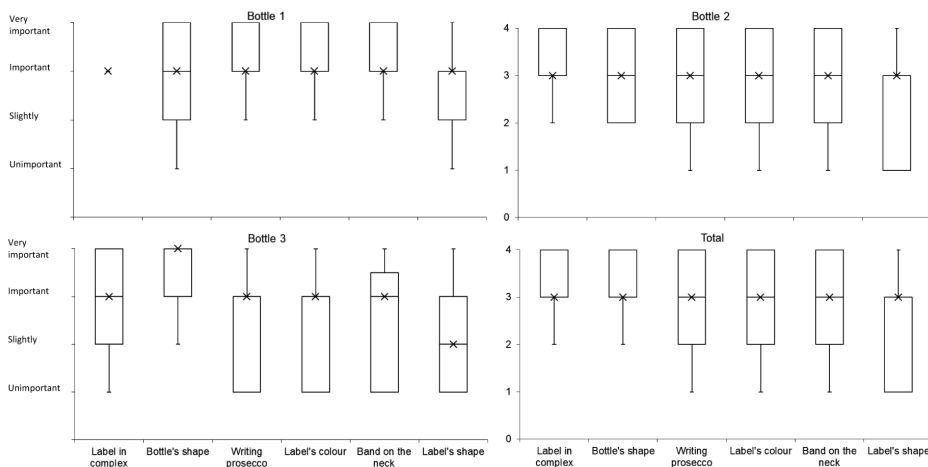*Figure 2 - Frequencies (%) of bottles rated first place*

They chose the number three, whose packaging was perceived as more innovative and modern, with a different bottle's shape. Indeed 77.1% of respondents tend to consider quite or very important Bottle's shape, and in particular, the share increases to 88.9% for bottle number three (Figure 3). Band on the neck, Writing "Prosecco" and Label's colour are important (over 60% points out them as quite or very important attributes), but they are not crucial in the choice. Almost 50% reveals Label's shape as not at all or slightly important. Finally, overall, Label is quite or very important for 80.4% of interviewed customers. However, as we will see below, this attribute is not really able to determine the bottle's choice.

Figure 3 - Percentage of respondents who rated attribute quite or very important

Since the attributes drive the choice, we derive the importance of bottle attributes depending on which bottle has been chosen (Figure 4). Those who preferred bottle 1 assessed the Writing "Prosecco", Band on the neck and Label's colour with a higher rating. For bottle 3, Bottle's shape was the most significant element. For people who chose bottle 2, almost all attributes are important, except for the Label's shape, which is less important also for bottle 1 and 3. Figure 4 explains why the overall Label characteristics cannot forecast the chosen bottle: almost everybody rated this attribute as important.

Figure 4 - Box plot of bottle attributes rating by the preferred bottle

3.2. *Model estimation*

The variables considered in the estimated ROL model are gender, age, education level, frequency of wine and Prosecco wine consumption, frequency of wine purchase, the reason for buying Prosecco wine and its reference price. Moreover, we consider the choice motivation and transformed the four-point Likert scale into a dichotomic variable, where 1 indicates the bottle attribute is quite or very important in the customer preferences, and 0 indicates the attribute is slightly or not at all important (Annex 2).

As stated above, in order to achieve identification, we set bottle 1 as the reference alternative. We considered different model formulations, and in the final one (Table 2) we included only variables significant at least at the 10% level. Since the ROL model belongs to the logit model class, estimates can be interpreted in terms of odds-ratio by exponentiating the coefficients. Thus, the coefficients indicate the percentage change in the odds of ranking a particular alternative compared to bottle 1 for a unit change in an explanatory variable. In this formulation, constants are not statistically significant. So we can state that no difference is perceived between bottle two and three by the interviewee after we have controlled for socio-demographic and preference variables.

Considering the effect of covariates on the probability of choosing a particular bottle, all else being equal, all attributes are not significant for bottle 2, while for bottle 3 they are all significant: the more relevant result is related to the bottle's shape. Indeed, the Bottle's shape being quite or very

important increases the odds of preferring bottle 3 over bottle 1 by 257%. Considering the Label's colour quite or very important, instead, decreases the odds of preferring bottle 3 by 46%; the "Prosecco" writing decreases the odds of choosing bottle 3 by about 70%, while looking at the Band on the neck as a quite or very important element diminishes by about 60% the odds of preferring bottle three. Label in complex results not significant in the estimated regression since the respondents assigned almost equal importance to this attribute (Figure 4).

Once we have controlled the bottles' element heterogeneity, we see that socio-demographic variables also affect preferences. Tertiary education, age over 55, drinking wine every day, and drinking Prosecco wine as an aperitif, all increase the odds of bottle 3, pointing out some heterogeneity in the customers' value function, which probably applies different decision weights. To test whether socio-demographic variables affected the preferences, we included interactions between the bottle's attribute importance and respondents' characteristics. We tried many specifications of the model with different kinds of interaction. The most reliable formulation is proposed in Table 3, where only the Band on the neck and Writing "Prosecco" are allowed to vary over socio-demographic characteristics.

In terms of goodness of fit (Table 4), the two models are very similar. The Log-likelihood differ only for one point, and the log-likelihood ratio (LR test) is statistically significant in both cases (the chi-square statistic p-value < = 0.05, indicates the estimated model improves the fit to the data significantly). It is impossible to compute the R^2 statistic for the ROL model, but the so-called pseudo R^2 (Cox & Snell, 1989) surrogates it. Both models clearly improve the proportion of explained variance in the dependent variables compared to the model with constants-only, but the second model shows a slightly higher pseudo R^2. The full model correctly predicts 54,6% of cases, while the first model 53,3% and the model with the two constants less than 52%. In terms of the Akaike information criteria (AIC), the first formulation have the minimum AIC: it has almost the same log-likelihood level, but it is the most parsimonious.

Reading Table 3 (in this specification with interaction), the parameter estimates are very similar to those obtained from the previous model: constants are not significant, bottle's attributes are significant only for the third bottle and respondents characteristics are no longer significant. Moreover, the interacted coefficients are significant with p-values less than 0.10: this means that the valuation of weights of the bottle's attributes is not constant by categories of customers' socio-demographic characteristics. In other words, the coefficients vary between different groups of

respondents[2]. In particular, for bottle 2, all but one interacted coefficients were not statistically significant at the 0.1 level: only graduated and non-graduated respondents differ in their preferences for Writing "Prosecco" (it is worthwhile to underline that the two groups have the same bottle preferences: Tertiary education coefficient is not significant). Instead, for bottle 3, interacted coefficients are all significant at the 0.1 level, except in one case. Indeed, in this case, graduate and non-graduated customers' preferences for Writing "Prosecco" are no longer different. Instead, customers who drink Prosecco as aperitif show different preferences for Writing "Prosecco". Moreover, the 55+ year-old perceive Band on the neck differently from younger people; this attribute is also seen dissimilarly based on the frequency of Prosecco consumption.

It is easier to read the results of Tables 3 in terms of bottle preference. Bottle 2 is statistically identical to bottle 1. There is a marginal difference about Writing "Prosecco": non-graduated customers prefer the writing of bottle 1, while for graduated ones, they are quite indifferent. On the contrary, bottle 3 is different from bottle 1: customers prefer Label's colour of bottle 1, but they choose the shape of bottle 3; Writing "Prosecco" decreases the probability of selecting bottle 3, but less for people who drink Prosecco as an aperitif; finally, also Band on the neck diminish the probability of taking bottle 3, but for customers aged over 55 or who drink wine every day, Band on the neck is not important.

Table 2 - Attributes effects on Respondents' preferences

Variable	Bottle 2				Bottle 3			
	Coef.	**Odds**	**%**	**Sig.**	**Coef.**	**Odds**	**%**	**Sig.**
Constant	−0.068	0.934	−6.6		0.460	1.583	58.3	
Label's colour	−0.206	0.814	−18.6		−0.617	0.540	−46.0	*
Writing "Prosecco"	−0.510	0.600	−39.9		−1.163	0.313	−68.7	**
Band on the neck	−0.122	0.885	−11.5		−0.907	0.403	−59.6	**
Bottle's shape	0.561	1.753	75.3		1.273	3.571	257.0	**
55+ year old	0.407	1.502	50.2		0.906	2.474	147.4	**
Tertiary education	0.648	1.912	91.2	*	0.649	1.9123	91.3	*
Drinks wine every day	0.794	2.212	121.2	*	0.891	2.439	143.9	**
Drinks Prosecco as an aperitif	0.360	1.434	43.4		0.664	1.942	94.2	**

Note: *p-value < 0.1; **p-value < 0.05

2. In order to present clearer results interacted coefficients are not differential but they are combined with socio-demographic characteristics.

Table 3 - Attributes effects on Respondents' preferences – model with interaction

Variable	Bottle 2				Bottle 3			
	Coef.	Odds	%	Sig.	Coef.	Odds	%	Sig.
Constant	0.321	1.378	37.8		0.856	2.355	135.5	
Label's colour	−0.226	0.798	−20.2		−0.626	0.535	−46.5	*
Writing "Prosecco"	−0.939	0.391	−60.9		−1.603	0.201	−79.9	**
Band on the neck	−0.185	0.831	−16.9		−0.975	0.378	−62.2	**
Bottle's shape	0.543	1.721	72.1		1.256	3.511	251.1	**
Writing "Prosecco" - Tertiary education	0.669	1.953	95.2	*	0.618	1.856	85.6	
Writing "Prosecco" - Drink Prosecco as aperitif	0.551	1.734	73.4		0.881	2.412	141.2	**
Band on the neck - 55+ year old	0.525	1.690	69.0		0.984	2.677	167.7	**
Band on the neck - Drink wine every day	0.770	2.161	116.1		0.928	2.530	153.0	*
55+	0.261	1.298	29.8		0.848	2.335	133.6	
Tertiary education	0.572	1.771	77.1		0.631	1.880	88.0	
Drink wine every day	0.806	2.238	123.8		0.777	2.176	117.6	
Drink Prosecco as aperitif	−0.102	0.903	−9.7		0.151	1.164	16.4	

Table 4 - Goodness of fit values for three rank-ordered logit models

Model	Log Likelihood	LR	df	Pseudo R^2	% of correct rank	AIC
Two constants (second and third bottle)	−304,921	31,607	2	0,049	51,955	613,843
First	−272,243	96,960	18	0,151	53,259	580,486
Second (with interaction)	−271,530	98,389	26	0,153	54,562	595,061

4. Discussion and conclusions

With this study, we investigated the preferences for attributes of three bottles of Prosecco wine, which consumers had never seen before, through the ROL model.

As well documented in the literature, age affects decisions: younger market prefers modern, innovative and distinctive packaging (Batt & Dean, 2000), while in this research, we find older persons are likely to choose newer bottle's shape. Moreover, results suggest gender does not affect decisions, while education, experience and habit strongly influence preferences towards newer bottle's shape. This result confirms Mueller & Szolnoki (2010) findings, showing how consumers' preferences depend on experience and that frequent wine consumers were influenced by packaging. Also, Corduas *et al.* (2013) signal that packaging (label and bottle shape) and brand name are of little importance for Italian consumers. The positive effect for such attributes increases in case of daily consumption since everyday wine is mostly considered as a 'simple' beverage. This aspect also relates to brand recognition in a market where costumers are overwhelmed by too many choices. Where the sector's fragmentation complicates the sales process, the label is not only used as a tool to give information, but its design, associated with the aspect of the bottle and seal, make the product visually distinctive, standing out on the shelves, and attractive to potential purchasers.

Results from rank-ordered logit analysis show that reference price was considered not important. Consumers not always like more innovative packaging: in this research, a newer bottle's shape is appealing, but a more traditional bottle's neck or a bright label or a bigger and more elegant Writing "Prosecco" are preferred. This result confirms Celhay and Trinquecoste (2008) finding that French consumers, whether young or old, novice or expert, still prefer wine with traditional labels to reduce perceived risk. Allowing for preference heterogeneity, the estimated measures of the importance of each bottle attributes, relative to attributes of reference bottle, in determining consumer preferences are very similar to those obtained from the former model, where all respondents are assumed to use the same preference pattern. Bottle 2 is statistically identical to bottle 1, while bottle 3's shape contributed to the largest percentage of consumers' preference rating (251.1%). The Band on the neck and the Writing "Prosecco" diminish the probability of choosing bottle 3 by 62.2% and 79.9%, respectively. Also, the label's colour of bottle 3 decrease its utility (-46,5%), but it is marginally significant.

The results from the regression model with interaction between socio-demographic variables and bottle's attributes indicate that customers do not apply the same decision weights: for interviewees aged over 55 or who drink wine every day, the Band on the neck does not seem to be important, while for other groups the Band on the neck diminishes the utility of bottle 3. Writing "Prosecco" decreases the probability of selecting bottle 3, too, but for consumers who drink Prosecco as an aperitif, the reduction is less strong.

These findings suggest that it is difficult to please all customers through only one packaging. For this reason, survey research like the present one can be useful to reduce the risk of failure and assess customer preferences before launching a new packaging.

This work also provides some managerial implications. In the past, the role of packaging and labelling was exclusively related to protecting the product and providing information; more recently, they have taken on an important role in marketing communication and the decision-making process. Therefore, many wineries have recognised the importance of having good packaging to differentiate the offered products (Rundh, 2009) and reduce information asymmetry. This study could help managers and wine label designers identify the most relevant packaging's attributes for consumers and address the label design and colour, the bottle's shape and neck consistently with the target market segment.

This pilot study was based on a convenience sampling procedure, prone to self-selection, then it has limitations in terms of representativeness and the possibility of generalising the results. An additional wave of data collection based on a sample that better fits the population of interest's social characteristics would be necessary to validate the results.

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Annex 1 - *Sample composition (percentage frequencies)*

Characteristics	%	Variables	%
Gender		Main reason to buy Prosecco	
Female	56,4	For present or during special	
Male	43,6	occasions	71,5
Age		Usual consumption	28,5
25-34	22,9	Bought a bottle of wine	
35-44	22,9	In the last month	86,6
45-54	17,9	Over a month ago	13,4
55+	36,3	Bought a bottle of Prosecco	
Education		In the last month	55,3
Less secondary		Over a month ago	44,7
Secondary	15,1	Drink wine	
Bachelors	44,1	Every day	26,3
When buying Prosecco at super/iper	40,8	More than once a week	36,9
market spends		Once a week	36,8
Less than 5 euros	38,9	Drink Prosecco*	
5-6 euros	31,8	During parties	63,1
6+ euros	29,3	As aperitif	54,2
		During meal	28,5

Note: * Multi-response question.

Annex 2 - *Description of variables*

Variable	Description	Kind of variable
Label's colour	Importance of label's colour in their choice	Dummy: 0 = slightly or not at all important; 1 = quite or very important
Writing "Prosecco"	Importance of writing "Prosecco" in their choice	Dummy: 0 = slightly or not at all important; 1 = quite or very important
Band on the neck	Importance of label's colour in their choice	Dummy: 0 = slightly or not at all important; 1 = quite or very important
Bottle's shape	Importance of bottle's shape in their choice	Dummy: 0 = slightly or not at all important; 1 = quite or very important
55-70 year old	Age group	Dummy: 0 = age25-54; 1 = age 55-70
Tertiary education	Education level	Dummy: 0 = compulsory or secondary school; 1 = graduated
Drink wine every day	How many times drink wine per week	Dummy: 0 = drink wine once or more a week; 1 = drink wine every day
Drink Prosecco as aperitif	When drink Prosecco	Dummy: 0 = drink Prosecco during meal or parties; 1 = drink Prosecco as aperitif

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