

The influence of verbal and non-verbal information on the consumer decision - analysis using the example of white wine

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Abstract

The main aim of this paper is to analyse the influence of different non-verbal and verbal information of bottled wines on the consumer decision and on the taste perception. Two case studies have been conducted to quantify the size of the influence factors such as origin, variety, brand name (identification factor) and elements of packaging. Analyses of the relative importance of these factors are based on a conjoint measurement and on a hedonic approach. The conjoint analysis simulated a real buying decision without tasting the wine, while the hedonic approach analysed a buying situation with wine-tasting. The results have showed that the non-verbal information can have a significantly higher influence on the buying decision than the verbal information and that the extrinsic cues are of vital importance for the consumers when tasting the wine. By means of segmentation results, it can be concluded that there are consumer-groups which are significantly influenced in their evaluation by different elements of packaging and by identification.

Introduction

The increasing number of new wine products has made it difficult for producers adjusting to the market and to the new competition. Nowadays, they have to differentiate their products and brands not only by means of taste and terms but also by means of design.

The outcome of this development is that customers face a whole new amount of information which could be unhelpful and they might be overburdened (Berndt, 1983). To avoid this situation customers seem to look for quality signals (cues) to help them make the right buying decision (Olson and Jacoby, 1972). Furthermore, the importance of non-verbal information has grown due to the increase of off-trade sales in supermarkets and self-service selling markets.

Wine sales in which professional service is not available add up to more than 75% of the total quantity of wine sold (DWI, 2007). In such cases it is rarely possible to taste the wine or to get any specific information about the product, which means that the packaging becomes a medium of communication between the seller and the buyer.

In this respect, the packaging of wine plays a very complex role in the buying decision. From the consumer's point of view the packaging functions as a storage vessel, secures transportation and provides necessary information. Dozens of new product launches and relaunches have proved that packaging has gained in importance (cp. e.g. Medeyros, 1982; Gabler, Bruke und Jones, 2000 or Fuchs, 2004).

Consumers are not buying simply a "product" but also a positive image, life-style, picture, colour and model. They are expecting more of a product than its original task of "satisfying thirst" – their emotional needs have to be satisfied, too.

The aim of this research was to identify the main deciding factors for customers when buying wine, based on the non-verbal and verbal information, with and without having the chance to taste the wine. The main goal was to research the importance of the packaging not separate from but parallel to other presented factors. This approach alone allows us to quantify and compare the importance of the factors influencing the decision to buy.

Theoretical background

Correlation between total value, basic value and additional value

We assume that the origin, the grape variety, the brand name as well as the packaging of the wine are used as purchase cues.

It is generally agreed that the expected value of a bottle of wine is influenced by its basic and by its additional value (Vershofen, 1959). In the case of wine the basic value is the perceived taste of wine, while factors like the country of origin, the variety and the brand name as well as the packaging function as additional value during the buying process. If consumers cannot try the wine before making their decision there is only an expected basic value (expectation of how the wine tastes). We assume that during the purchase, the additional value and the grade of experience of the expected basic value of the wine is set (figure 1).

Figure 1: Buying situation without tasting the wine

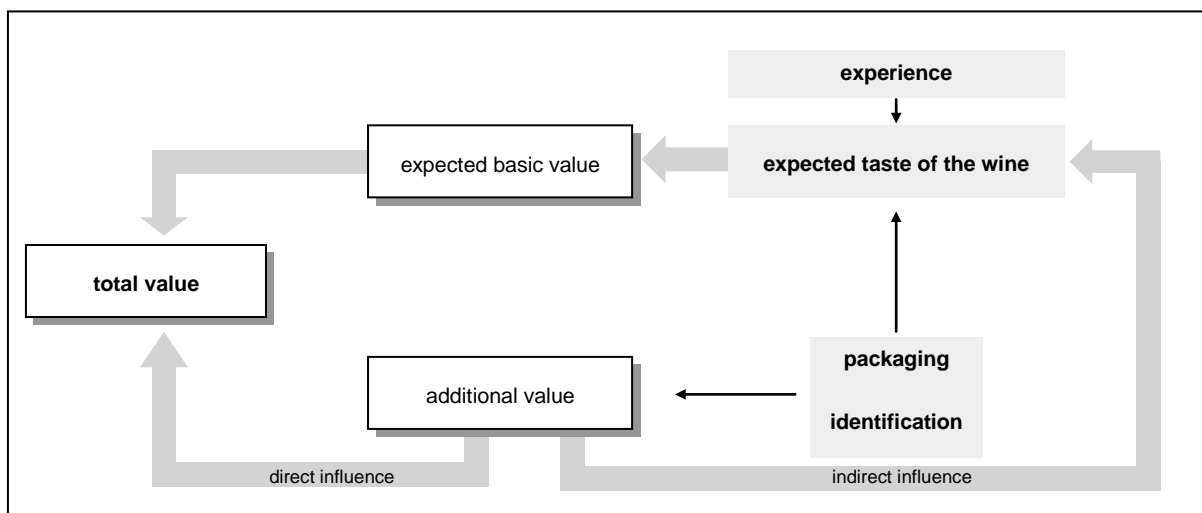
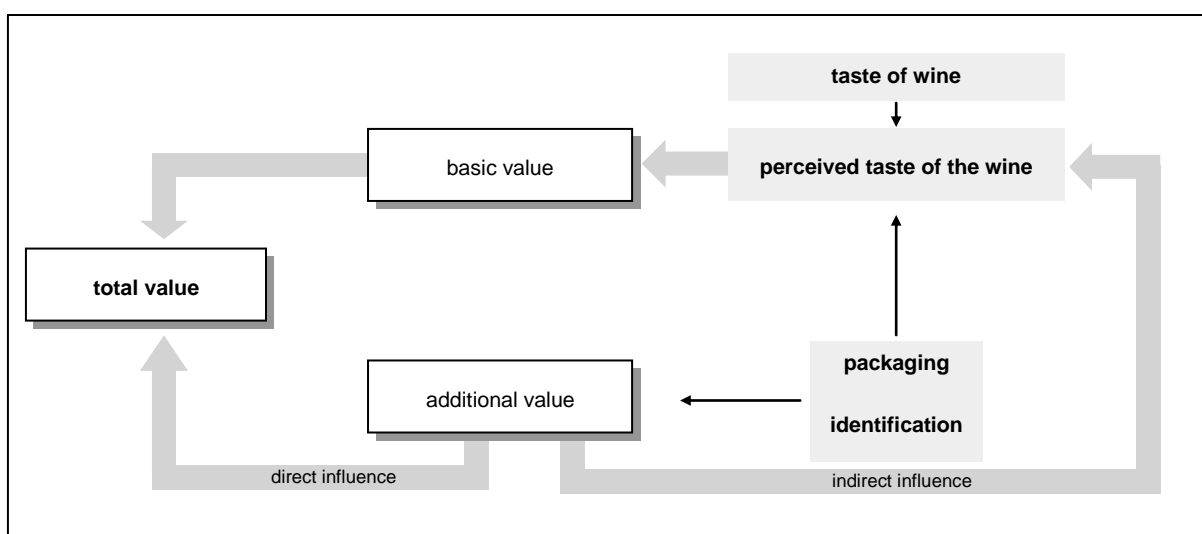


Figure 2: Buying situation with tasting the wine



If there is a possibility to taste the wine before buying it, the perceived taste of the wine influences the basic value. In these analyses it was supposed that the non-verbal and verbal information can also influence the perceived taste and through this the basic value of the wine.

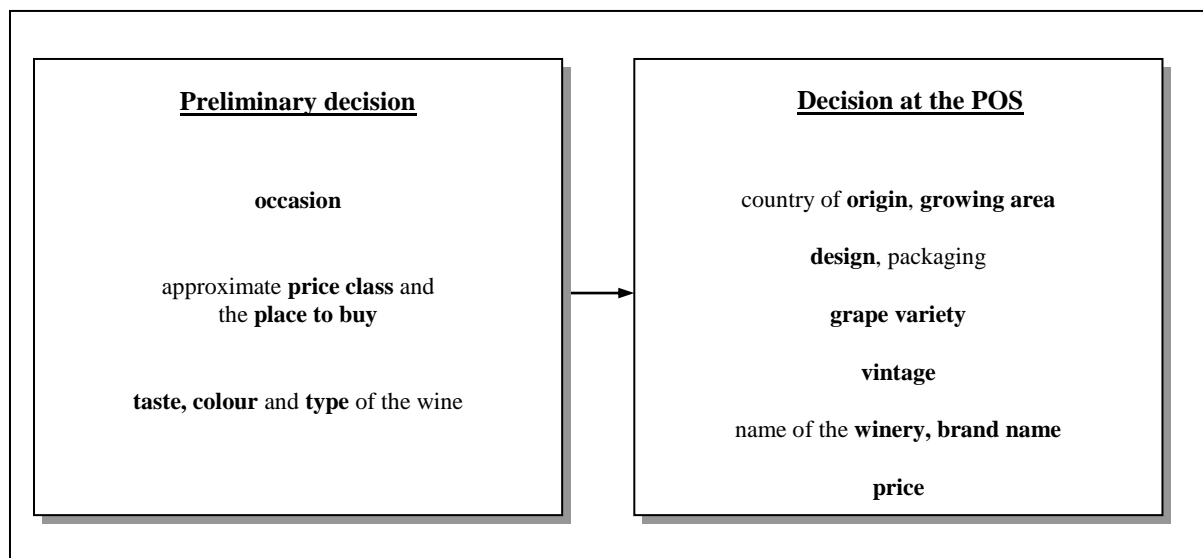
The correlations of the factors mentioned in the first and the second model were analysed in the framework of the two different approaches.

Process of buying decision

Research by Hoffmann & Seidemann (1999) as well as by Szolnoki (2007) shows the difference between the preliminary decision and the decision at the point of sale (POS). If it is not an impulse buy the consumer decides first of all about the occasion and parallel to this about an approximate price class. The first two decisions determine also the place to buy the wine (discounter, supermarket, specialized trade or direct at the winery) followed by the colour and the taste of the wine. By the fixing of these factors the circle of the potential wines will be limited.

At the point of sale there is some latent and evident information for an external search. Evident information is observable for the consumer, but latent information and its influence stays hidden during the decision (Ellinger, 1966). Written information like origin, variety, brand name or vintage belongs to the evident/verbal information while design (design is the effect of components of the packaging) belongs to the latent/non-verbal factors (figure 3).

Figure 3: Influencing factors



This study concentrates only on the decisions at the POS, because, in the majority of cases, only at the POS can the parallel influences of verbal and non-verbal information be investigated.

Direct vs. indirect questioning

Consumers are not aware of the physiological and psychological impacts of visualized communication, therefore it is difficult to find the right method to analyze the impact of the packaging on their buying decision (cp. Müller, 2006).

Usually questionnaires are based on the method of “direct questioning”, as this is fast, uncomplicated and includes direct questions. Direct question surveys are directed toward customers who are aware of the topic in question and respond to the questions knowledgeably. However, this method has two disadvantages: 1) the deciphering of the process of the subconscious and 2) the socially expected answers.

Most customers are not generally conscious of the moment they make a buying decision; consequently this decision takes place in their subconscious. It is too idealistic to ask the

consumers what process takes place in their subconscious, as they are unaware of it themselves. In such cases the respondents answer by acceptable social response. The respondent would tend to assess the personal influence of the packaging as quite low, out of fear of being labelled a snob or incompetent, thus denying paying too much attention to the packaging of the product

Methodology

To reach a proper result through such a questionnaire, this research used two analytical methods concerning the purchase of wine (indirect questioning technique):

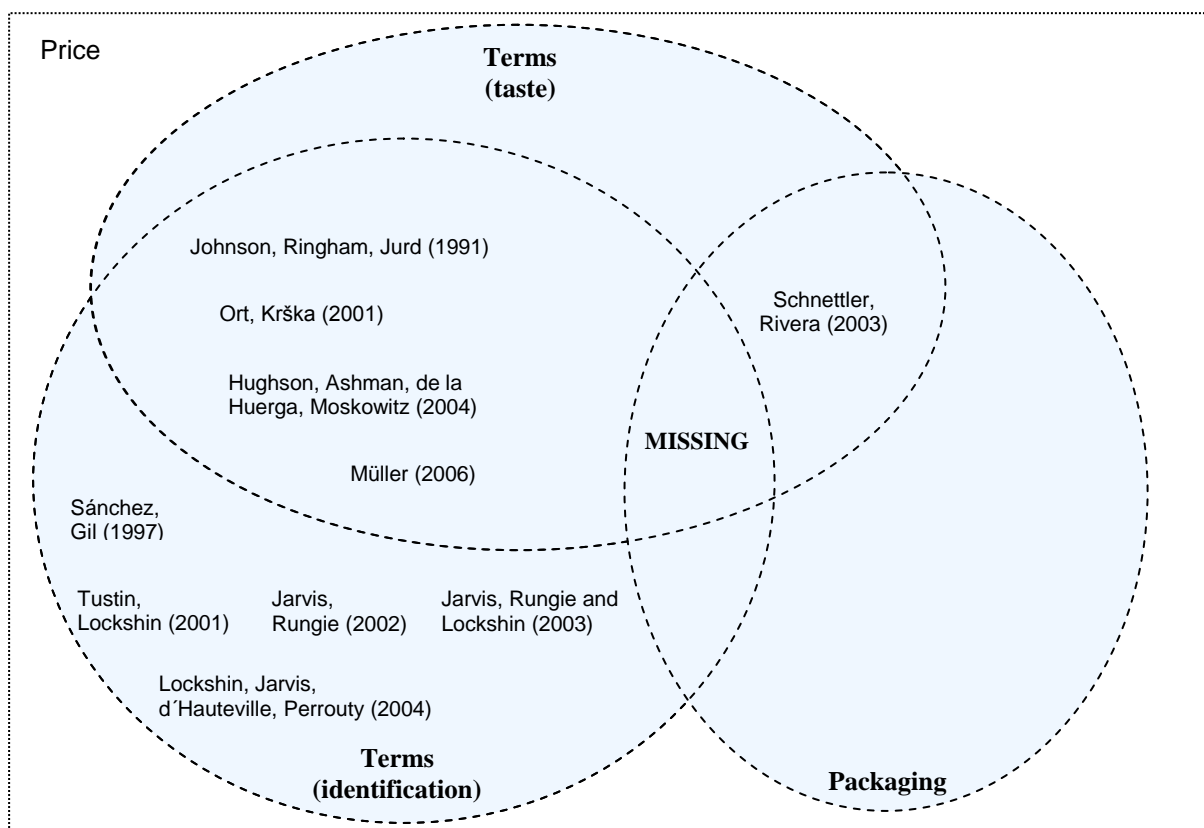
- 1) a decomposition procedure (conjoint analysis) simulating a buying process without tasting the wine,
- 2) a composition procedure (hedonic analysis) simulating a buying process including tasting the wine.

Conjoint analysis

Conjoint analysis is a technique for measuring consumer preference structures based on a decomposition model. Respondents can estimate total profile descriptions, not simply levels of the different parts. Thus, the advantage of conjoint measurement is the simulation of a real choice situation (Green and Srinivasan, 1978).

There are some conjoint analyses which have already dealt with wine as a product. These studies were collected and classified on the basis of their attributes and attribution levels, in order to look for combinations of attributes which have not yet been analysed. The list of the conjoint analyses is not exhaustive. The graphical summary of the literature overview is found in figure 4.

Figure 4: Literature overview of conjoint analyses



A missing area results from the analysis of the previous conjoint analyses. There is no conjoint analysis which examines the influence of all three factors (terms of identification, terms of taste and packaging) together.

The conjoint analysis of this work aims at the relative importance of verbal and non-verbal information by methods of a decomposition procedure, which simulates a purchase decision without tasting the wine, regarding all buying decision factors in total and not judging individual attributes. According to the results illustrated in figure 3, we determined the factors of the second group (decision at POS), as significant attributes for the conjoint analysis. To simplify our research model, factors like growing area, design, variety and price were selected for the analysis. The first attribute is made up of the growing area and the variety, which was called as identification criteria. In contrast to it, the packaging was separated into three components: bottle colour, bottle shape and label style. The price remained on the left side of the equation as a depended variable.

Table 1: Attributes and their levels

Attributes/ attributes level	Identification	Bottle form	Bottle colour	Label style
1)	Italian Pinot Grigio	Bordeaux-bottle	brown	international
2)	Pfalz Riesling	Rhine-bottle	green	extravagant
3)	Mosel Riesling		white	traditional

During the selection of the attribute levels, we were careful to use possible realistic alternatives in the test. In this analysis, a wine from the Pfalz region, a wine from the Mosel region, as well as an Italian wine were selected. For the German wines, we chose the grape variety Riesling, and a Pinot Grigio represented the Italian wine. As bottle forms the Rhine-bottle (also known as flûte) and the Bordeaux-bottle were selected. The label has too many individual characteristics (cp. Seidemann, 2000), which we could not include in our conjoint model. Therefore, we defined a complex attribute, which in itself unites all other sub-attributes of the “label style”. The labels which proved to be significant in a pre-study were selected for this conjoint analysis as basic labels. The attribute “bottle colour” was determined through the three colours occurring often: white, green and brown.

According to the selected number of the attribute levels, 54 alternative options resulted (full factorial design). These 54 alternatives were reduced through Orthoplan of SPSS 13.0 to 9 profiles. Because of the aim of the analysis – to measure the influence of different elements of packaging – it is not sufficient to test only a description of the profiles. Therefore, the 9 profiles were presented in the form of photos.

The following rules apply to the photomontage of the profiles:

- All verbal and non-verbal information which were not correlated with the selected attribute levels and could influence the evaluation, were removed (in this case: brand name, producer, special quality terms, logo).
- The photos of the bottles had to have the same size and the same quality.
- All other attributes, which were not selected for the conjoint analysis (vintage, quality level, taste preference, fill quantity, alcohol level) had to be represented on the label for every profile in a standardized manner.

The photos were set up with software Adobe Photoshop 7.0. The label included the identification (origin and variety), the vintage (2005), the quality level (quality wine or DOC), the taste (dry), the fill quantity (0.75 l) and the alcohol level (12% vol.).

Through presetting a buying motive (Friday evening wine with friends), the colour (white wine) and the taste (dry), the variables for the preliminary decision (cp. Figure 3) were defined. In this way we reduced the influence of the preliminary decisions to zero.

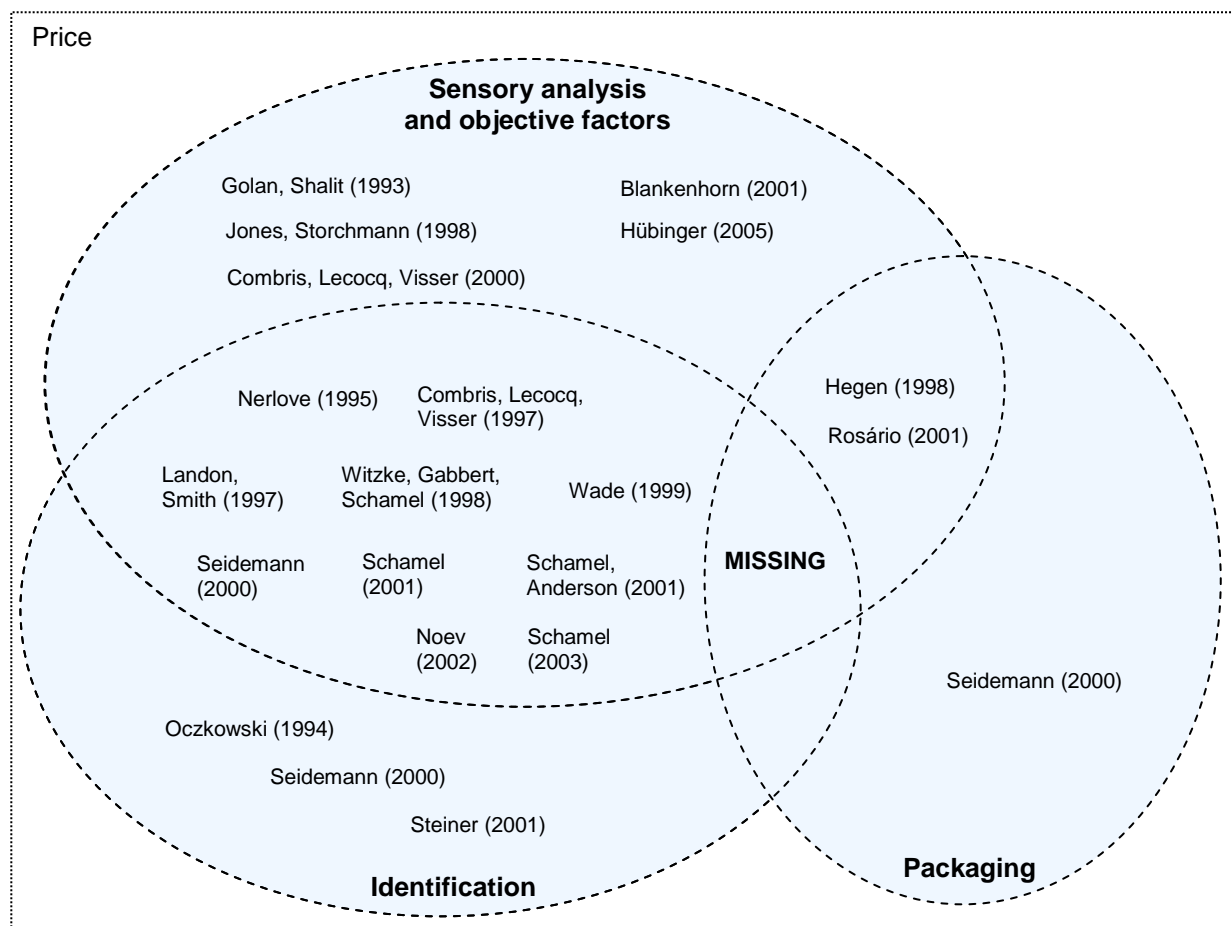
The respondents got nine cards with photos of the profiles, which they had to order depending on which wine is best and which one is least suitable for the defined occasion. In addition, respondents had to indicate their maximum amount they would be willing to pay for each of the wines. Consequently, a non metric (ranking) and a metric (willingness to pay) scale were created. In a framework of the conjoint analysis 500 German wine consumers were asked in Berlin within a central studio test.

Hedonic analysis

Hedonic analysis is a composition procedure which permits the analysis of the individual attributes of a product (Hermann und Homburg, 2000). This method is generally based on the so-called hedonic pricing model which amounts to a regression analysis of the influence of product attributes on the price (Combris, Lecocq and Visser, 1997). The only difference between the hedonic pricing model and the hedonic model of this study is that in our model not price but taste perception and willingness to buy are on the left side of the equation – as dependent variables.

As with the conjoint analyses, the available hedonic studies were collected and classified on the basis of their independent variables (figure 5).

Figure 5: Literature overview of hedonic analyses



As the overview shows, there is no hedonic analysis with primary data from a consumer survey, which deals with all three factors (identification, taste perception and packaging) simultaneously. The hedonic model of this study was created to quantify the influence of the above-mentioned three factors and the price on the willingness to buy.

In order to avoid a direct survey, a wine tasting was conducted within a central location test with German wine consumers. This test simulated a real buying process including tasting the wine. We modelled a buying situation by defining the preliminary decisions for the interviewees: "Put yourself in the situation that you are looking for a good dry white wine to enjoy over dinner tonight with friends". The buying motive, the colour and the flavour of the wine were defined, so that we reduced the influence of the preliminary decisions to zero.

The respondents tasted four wines: first of all a blind tasted wine, after that a Mosel Riesling, an Italian Pinot Grigio and finally a Rheingau Riesling. The pretence of the tasting was that the respondents got the same wine in four different kinds of packaging (the first tasting was a blind tasting - without any visual influence). In the framework of the test we asked the respondents to evaluate first how they found the packaging, the image of the origin, of the grape variety and of the brand name and afterwards the perceived taste of the wine, as well as the willingness to buy and the price acceptance.

The attributes were evaluated on a 1-to-7-scale so that a two-stage recursive model (without interaction between the dependent and independent variables) could be developed as follows:

$$(1) \quad \text{TasteP}_{ij} = f(\text{Pack}_{ij}, \text{Orig}_{ij}, \text{Gvar}_{ij}, \text{Brand}_{ij}, \text{TasteN}_{ij})$$

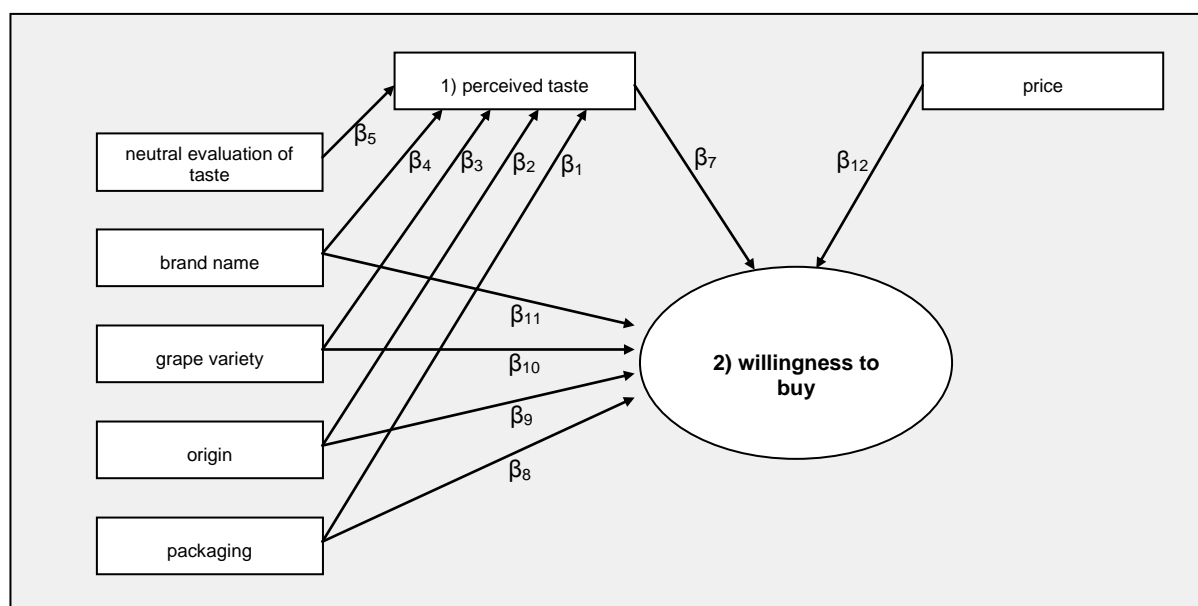
$$(2) \quad \text{WillB}_{ij} = g(\text{TasteP}_{ij}, \text{Pack}_{ij}, \text{Orig}_{ij}, \text{GVar}_{ij}, \text{Brand}_{ij}, \text{Price}_{ij})$$

where

- TasteP_{ij} = Evaluation of perceived taste of wine i by respondent j ;
- WillB_{ij} = Willingness to buy of wine i by respondent j ;
- Pack_{ij} = Evaluation of packaging of wine i by respondent j ;
- Orig_{ij} = Quality expectation of origin of wine i by respondent j ;
- Gvar_{ij} = Quality expectation of grape variety of wine i by respondent j ;
- Brand_{ij} = Quality expectation of brand name of wine i by respondent j ;
- TasteN_{ij} = Neutral evaluation of taste of wine i (blind tasting; no visual influence of factors of additional utility) by respondent j ;
- Price_{ij} = Price acceptance of wine i by respondent j (3.99 €/bottle).

In the first stage, the perceived taste and in the second stage, the consumers' willingness to buy was examined as the dependent variable. As independent variables for perceived taste, the following factors were used: packaging, origin, variety, brand name, neutral taste evaluation; as independent variables for the consumers' willingness to buy, the following factors were used: packaging, origin, variety, brand name and perceived taste. Figure 6 shows the relation of the two equals as a recursive model.

The model was estimated using seemingly unrelated regression (SUR) to estimate the two equals simultaneously. The estimate was based on the examination of attributes of 521 respondents (central studio tests in Berlin, Düsseldorf and Munich). The data of the test wines was put together and examined as a whole (cumulative examination). This kind of examination resulted in a better adjusted R-Square.

Figure 6: Relation of the two equals (recursive model)

Results

The conjoint analysis could indirectly determine the influence of verbal and non-verbal information on the purchase decision without tasting the wine. The outcome which contains the relative importance of the attributes was in favour of the packaging of wine. The results show that the label style achieved the highest importance (39.5%) under the selected attributes. The second highest factor was the classification of wine at 29.9%, followed by the bottle colour at 18.6% and the bottle form at 12.0%.

These results (mean value of the relative importance of the attributes) supply first findings and describe only the buying decision of an average consumer. To analyze the heterogeneity of the relative importance in-depth, a segmentation (hierarchical cluster analysis, Ward method) was carried out and a segment specific analysis was conducted. The aim of this analysis is to uncover differences in the buying behaviour and to describe the segments by socio-demographic and behavioural patterns.

In addition to the relative importance of the attributes, five socio-demographic and behavioural patterns (age, wine consumption, purchase intensity in special wine stores, taste preference of white wine and wine knowledge) were included into the model of segmentation.

The cluster analysis made it possible to separate three consumers segments: 1. "younger consumers without experience" (34%); 2. "older wine connoisseurs" (33%); 3. "mainstream" (33%). The denotation of the segments occurred according to the socio-demographic and behavioural patterns.

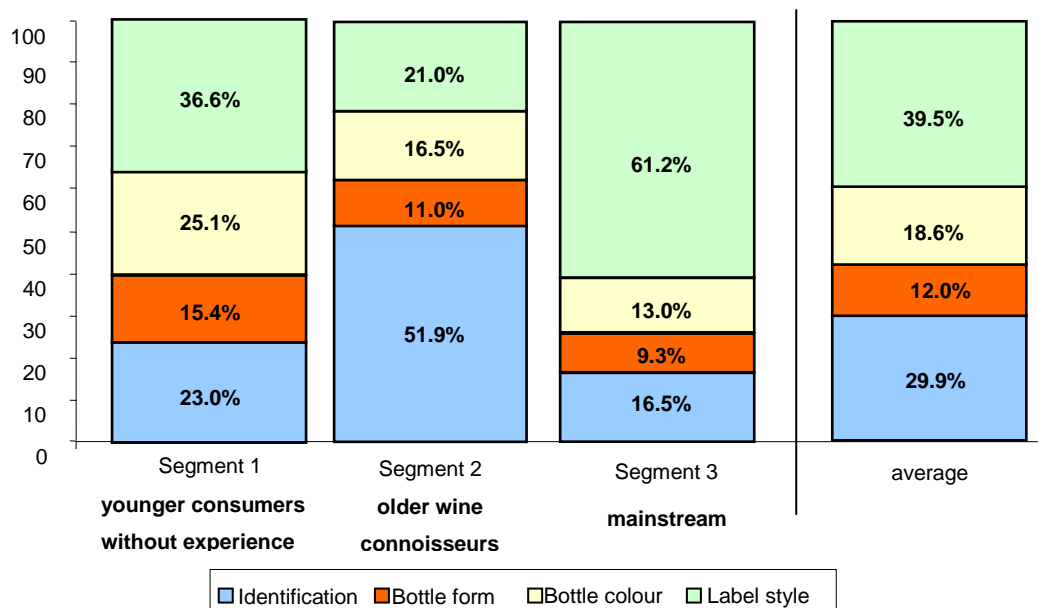
After separating consumer groups the relative importance of the attributes were analysed in every segment. It can be stated that the influence of the packaging is in correlation to customer segmentation (fig. 6).

The consumers in segment 1 were designated as "*younger consumers without experience*". In this segment the majority of the consumers are younger than 26 years. Their wine consumption of approx. 12 litre/year is very moderate compared to the other two segments. The typical representative of this consumer group drinks sweet or semi sweet wines and does not have much knowledge of the wine world. This outcome shows that younger consumers without experience are usually newcomers into the wine world. They have earnings below

average and accordingly, they buy their wines in discounters and supermarkets. For this segment German wine achieves only 38%, which indicates that the younger German generation prefers to drink foreign wines. Young consumers experiment with unknown wines, accordingly, the part of the primary purchase is higher here than in the case of the other segments. In addition, they drink more white than red wine.

Young inexperienced consumers are disoriented during purchase. Although the label style and the denotation show an almost average value (36.6 % and 23.0%), the influence of the bottle form and the bottle colour is highest with 40% under the three segments (see fig. 3). We assume that these consumers, because of their lack of experience do not pay attention to evident information written on the label but to packaging elements.

Figure 6: Relative importance of the attributes in each segment



The age emphasis of the segment "*older wine connoisseur*" is over 45 years. These consumers have a higher education and income. Their wine consumption is high (approx. 40 litre/year) and dry wines are favoured in this segment. They prefer to buy their wines in specialized wine stores and at winemakers but not at discounter facilities.

Older consumers have quite a good wine knowledge and a great interest in wine. They reluctantly experiment with unknown wines and buy wines they already know. In the reference to origin, they prefer German wines and drink more red than white wine. This segment represents the absolute opposite to the first segment.

The decisive attribute of the purchase decision in this segment is the wine identification of 52%. Older wine connoisseurs have more experience with varieties and countries of origin. Therefore, the influence of the packaging is relatively small; the "identification" achieved the highest value of all segments. The unconscious influence of packaging is suppressed by verbal information.

The third segment was labelled as "*mainstream*". This denotation does not refer to the decision process but to the socio-demographic and behavioural patterns of this segment. Except for wine consumption, all characteristics of this segment are similar to the mean value. To this segment belong consumers between 30-40 years, drinking approx. 30 litres of wine per annum and preferring semi dry wines. They know more about wine than the members of

the first segment and their purchase intensity in specialized wine stores is higher, too. Thus, they form a bridge between the first and the second segment.

We assume that these consumers search for evident information and therefore concentrate on the label. During the judgement process however, the visual information becomes more important and finally determines 60% of their buying decision. The subconscious influence of the label is highest in this segment. The other design elements were evaluated below average.

Generally, experienced consumers try to minimize the influence of appearance (see the segment "older wine connoisseur") during their purchase. The main fraction of wine buyers has a limited knowledge about wine culture and wine business. These consumers are designated as laymen; they require indicators and quality signals instead of professional terms in order to judge the quality of wine in a subjective way. The product price and also the elements of wine packaging belong to the decision indicators of these segments.

In addition to the conjoint analysis, another indirect survey, the hedonic analysis, was used. Unlike the conjoint analysis, the hedonic analysis is a composition procedure which simulates a purchase situation including tasting the wine.

First of all we estimated the second equation (see p. 8) to prove the assumption that in the case of a buying situation with the possibility to taste the wine the perceived taste has the highest influence on the decision. Table 2 shows the significant level and the coefficient (strength of influence) of the independent variables. As this result shows, the decision factor "taste" gains a much higher importance while the other influencing factors are of minor significance. In this case, the taste positively influences the buying decision by 59% (0.693), whereas the price has a moderate influence of 29% (0.337). A similar proportion of perceived taste and price acceptance was also proved in two other independent studies (Hübinger 2005; Hoffmann et al. 2006) which underlines the stability of the results.

Table 2: The results of the SUR estimation of the second equal

Dependent variable: willingness to buy			
Independent variables:	Coefficient	Standard error	t-Statistic
(Constant)	-1.621	0.166	-9.766
Perceived taste	0.693***	0.024	29.316
Packaging	0.062**	0.024	2.568
Origin	0.081*	0.033	2.472
Variety	0.043	0.033	1.303
Brand name	0.041	0.032	1.312
Price acceptance	0.337***	0.021	15.762
adjusted R ² = 0.598			n = 1563

Significance: ***99.9%, **99%, *95%.

In the second step it was analyzed how verbal and non-verbal factors could influence the perceived taste of the wine (see tab. 3). The significant variables exhibit the visual influence of the attributes, and the coefficients quantify the degree of this influence. As table 3 shows, all of the independent variables have a significant influence on the perceived taste of the wine. If the respondents had been consistent they would have evaluated all the four wines the same, including during the blind tasting. In this case the neutral tasting would have achieved the highest coefficient while the other factors would not have any significant influence on the perceived taste. However, the outcomes of table 3 show the opposite.

Packaging (0.258) and brand name (0.256) are by far the strongest factors to modify the tasting perception. They were seen in this case as an indicator of quality. The grape variety is placed third with a coefficient of 0.185. The neutral tasting, positively influencing a buying decision by only 0.128, was unexpectedly low, the second lowest factor was the wine origin (0.076).

Table 3: The results of the SUR estimation of the first equal

Dependent variable: perceived taste of the wine			
Independent variables:	Coefficient	Standard error	t-Statistic
(Constant)	0.274	0.198	1.386
Packaging	0.258***	0.026	9.891
Origin	0.076*	0.037	2.074
Variety	0.185***	0.036	5.066
Brand name	0.256***	0.034	7.450
Neutral tasting	0.128***	0.025	5.185
adjusted R ² = 0.259			n = 1563

Significance: ***99.9%, **99%, *95%.

To analyze the buying decision and the taste perception of different consumer groups a cluster segmentation was in which respondents were divided into five segments based on factors such as socio-demographic and behavioural patterns (age, taste preference of white wine, purchase intensity in discounter, wine knowledge and willingness to buy of the test wines): 1. “younger consumers without experience”; 2. “price sensitive consumers”; 3. “older wine connoisseurs”; 4. “red wine enthusiasts”; 5. “older wine drinkers with high income”.

A segment-specific regression examination also confirmed the significant differences between the five consumer groups. The members of the different segments use quality indicators for evaluating the wine. This claim is based on the varying degree of influence of the evaluation attributes on the individual respondent. Only the regression examination of the first equal was conducted in every segment (perceived taste), because – except for some results – the evaluation of the second equal delivers similar outcomes.

“*Younger consumers without experience*” (42%): this segment is similar to the first consumer group of the conjoint analysis. Younger consumers have low incomes; their wine consumption and also their wine knowledge are moderate. They prefer sweet and semi sweet wines and buy their wines mostly in discounters and supermarkets.

Consumers of this segment do not have so much experience with wine and are not yet influenced by image factors like brand name or country of origin. They are disoriented during the purchase; this fact is also confirmed by the results: all of the selected factors have a significant influence on the perceived taste in this group, but the value of the coefficients is more or less similar.

“*Price sensitive consumers*” (11%): The most important characteristic of this segment is that these consumers have extremely high wine consumption. They prefer dry wines and buy cheaply - they favour discounters and supermarkets. According to their information they have a good knowledge of wines and drink mainly foreign wines. Members of this segment were very crucial with the test set and evaluated negatively all three test wines.

“Price sensitive consumers” orient their attention during the tasting at the packaging and at the grape variety. The other factors like origin, brand name or the neutral taste evaluation did not prove to be significant. This segment achieved the highest price sensitivity by the evaluation of the first equal; it confirmed the result of the cluster analysis: this consumer looks at the price.

“*Older wine connoisseurs*” (13%): The older wine connoisseurs distinguish from other segments very strongly through their age. They have above-average, though not extreme wine consumption and a founded wine knowledge. They favour the dry taste direction and traditionally buy their wines direct at wineries.

“Older wine connoisseurs” belong to a group in which the neutral taste evaluation has a significant and the highest influence on the perceived taste. This means that members of this

segment evaluated all four wines more or less similarly. It is assumed that this result is put down to the long-standing experience of the consumers of this cluster. Accordingly, older wine connoisseurs have a trained taste and cannot be influenced significantly by other image factors. This small segment represents those consumers who can judge the taste of the wine almost objectively. Consequently, they are regarded as "wine experts".

"Red wine enthusiasts" (17%): The members of this segment consume very little wine. If they drink they prefer red wines from abroad. Their knowledge about wine is marginal which is why they subconsciously base their taste evaluation unconsciously rather on information like packaging (0.244), brand name (0.216) and origin (0.175).

"Older wine drinkers with high income" (17%): The age and the income of these consumers are higher than the average. They refuse the discounters and buy their wines in special wine stores or direct at wineries. This segment favours German white wines.

The "older wine drinkers with high income" specified that they have a good knowledge of wine, leading us to suppose that – as in the segment of "older wine connoisseurs" – also in this group the neutral taste evaluation would have a significant influence on the perceived taste. The experiment showed however that extrinsic attributes like packaging or brand name have a higher influence on their decision. Under the significant influencing factors are the packaging (0.299), the grape variety (0.157) and the brand name (0.158). This segment is visually "seducible", as the results show packaging had the greatest influence on the perceived taste of wine.

Table 4: The results of the estimation of the first equal (coefficients with significant level)

Independent variables	younger consumers without experience	price sensitive consumers	older wine connoisseurs	red wine enthusiasts	older wine drinkers with high income
	N=217	N=59	N=65	N=90	N=90
Packaging	0.203***	0.374***		0.244***	0.299***
Origin	0.117*			0.175*	
Grape variety	0.198**	0.300**			0.157*
Band name	0.262***		0.274**	0.216*	0.158*
Neutral tasting	0.100*		0.235***		

Significance: ***99.9%, **99%, *95%.

Conclusion

This paper has presented the results of two different studies based on primary data collection. The conjoint analysis simulated a buying decision without tasting the wine while in the framework of the hedonic analysis the respondents were put in a buying situation with wine-tasting. In the models we included verbal information on the label, non-verbal information (packaging), as well as sensory characteristics in the hedonic analysis. Some pivotal questions of these two studies are, how strong is the influence of the selected attributes on the willingness to buy and on the perceived taste of the wine, furthermore how can this kind of influence be quantified?

These results show that verbal and non-verbal information for wine – like grape variety, country of origin, brand name and packaging – can have a huge direct influence on the subjective evaluation of the wine quality and thus on the consumer acceptance.

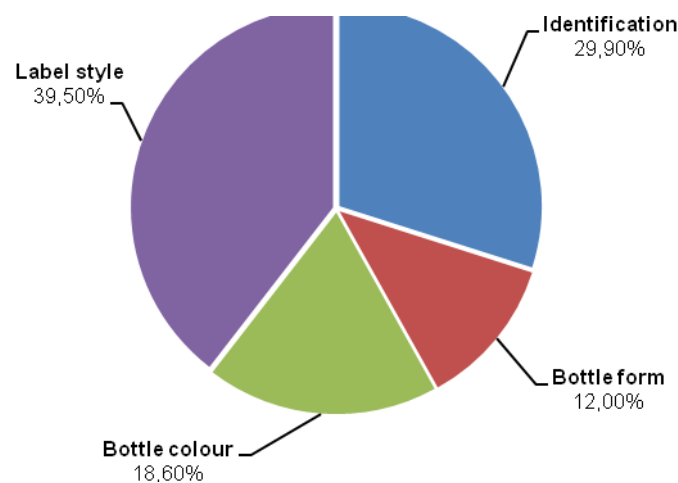
Figure 6 summarizes the relative importance of the attributes of the conjoint analysis. Label style is the most important factor under the selected and tested attributes. This factor achieves 39.5%. The second important factor is the identification of wine with 29.9% followed by the bottle colour (18.6%) and by the bottle form with 12.0%. The elements of the packaging, in this case the bottle form (12.0%), bottle colour (18.6%) and the label (39.5%), have the greatest influence on consumer acceptance (total 70.06%). The identification feature covers only 29.9%.

Furthermore, it can be stated that the influence of the packaging is in correlation to customer segmentation. Three groups of consumers can be distinguished by means of this influence:

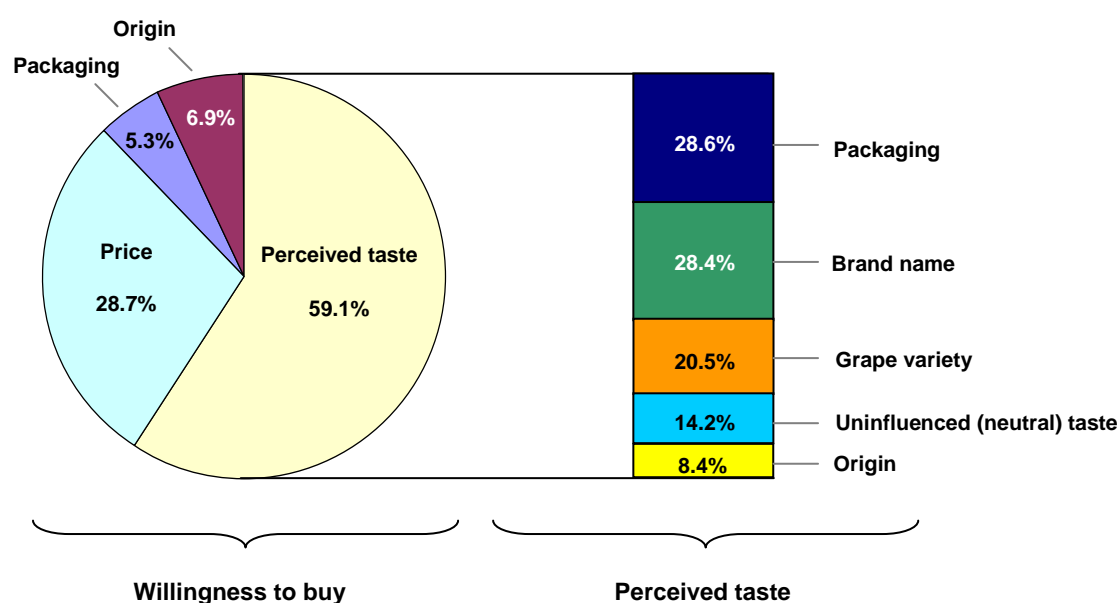
1. The "younger inexperienced", for whom the packaging (primarily the non-graphical elements like bottle colour and bottle form) is of extreme importance;
2. the "older experienced", who base their decision on the evident information on the label;
3. the "mainstream", who base their purchase decision mainly on label style.

Generally, experienced consumers try to minimize the influence of appearance (see the segment "older experienced") during their purchase. The main fraction of wine buyers has a limited knowledge about wine culture and wine business. These consumers are designated as laymen; they require indicators and quality signals instead of professional terms, in order to judge the quality of wine in a subjective way.

Figure 6: Result of the conjoint analysis



Hedonic analysis examined, amongst other things, the influence of verbal and non-verbal information on the perceived taste of the wine. As the left side of figure 7 illustrates the perceived taste plays the most important role (approx. 60%) if there is a possibility to taste the wine before buying it. The chart on the right represents the size of the influence of selected attributes on the perceived taste. Figure 7 shows which influencing factors come after the perceived taste of the wine that appears as a subjective result after a tasting of a wine.

Figure 7: Result of the hedonic analysis

A segment-specific regression examination confirmed that different consumer groups have different ways to make their buying decision and to evaluate the wine.

The “younger consumers without experience” can be influenced by all factors, while the “price sensitive consumers” pay more attention to the price. In the group of “older wine connoisseurs” the influence of neutral tasting is the highest. Consequently, they are regarded as the “wine experts” of the identified segments. For “red wine enthusiasts” the origin is the main decision factor. This outcome is indirectly confirmed through the two-stage model system. The “older wine drinkers with high income” specified that they have a good knowledge of wine but the experiment showed that extrinsic attributes like packaging or brand name can influence their decision, too.

The present work contains results of empirical analyses, which simulated a real purchase situation within the framework of a simplified model. In order to simplify the purchase situation the offer of wine products was radically reduced in both surveys to guarantee certain defined laboratory conditions and to be able to check the human purchase behaviour for wine. The reduction of the selection refers to eleven different wines during the conjoint analysis and to four wine alternatives during the hedonic analysis. The product tested in the analysis represents the price class (3-5 €/bottle).

The results represented in this work testify that a strong influence can be attributed to the verbal but also to the non-verbal information for the wine. The influence can depend on customers’ knowledge of wine, their involvement in the product, the subjective knowledge and the previous experience of the respondents, as well as on the randomly selected design variations found in these tests. In the case of differentiating the product by means of more extreme design variations, the design factor might gain importance in the consumers’ buying decision, as well as vice versa.

Additionally, the results are highly valid and therefore the model can be used to test the acceptance of new or relaunched products. The method used is able to simulate purchase decision of various target groups in a fast and not very expensive way.

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