SCIENCE SET
OPEN ACCESS PUBLISHERS

ISSN: 3064-9846
Research Article

Journal of Agricultural, Earth and Environmental Sciences

Sensory-Based Positioning Approach to Analyze Consumers' Wine Preferences

Eli Cohen[1]*, Justin Cohen[2] & Oded Lowengart[3]

[1]*Ben Gurion University of the Negev, Gilford Glazer School of Management*
[2]*Ehrenberg-Bass Institute for Marketing Science, UniSA School of Business*
[3]*Ben Gurion University of the Negev, Gilford Glazer School of Management*

***Corresponding author:** Eli Cohen, Ben Gurion University of the Negev, Gilford Glazer School of Management, Israel.

Submitted: 09 October 2025 **Accepted:** 15 October 2025 **Published:** 22 October 2025

https://doi.org/10.63620/MKJAEES.2025.1094

Citation: *Cohen, E., Cohen, J., & Lowengart, O. (2025). Sensory-Based Positioning Approach to Analyze Consumers' Wine Preferences. J of Agri Earth & Environmental Sciences, 4(5), 01-07.*

Abstract

Consumer expectations and efforts to reduce perceived risk play a central role in wine purchasing behavior. Branding and product positioning are widely applied strategies to cultivate positive perceptions of wine quality and origin. Nevertheless, perceived risk remains a critical determinant of consumer choice. As wine represents a credence good, tasting serves as one of the most effective means of reducing uncertainty regarding product quality. Although consumers cannot feasibly taste all wines prior to purchase, integrating tasting opportunities with branding strategies may offer a more comprehensive approach to stimulating demand. This study focuses on the tasting component of this approach to identify preferred combinations of wine characteristics based exclusively on sensory evaluation. The application of positioning maps, together with the identification of ideal combinations of wine attributes, enables the detection of potential modifications in wine characteristics that could better align products with consumer preferences. A series of experiments was conducted in which participants tasted and rated the sensory attributes of generic red wines. The results indicate considerable heterogeneity in consumers' perceptions across five different wines. However, there is a marked degree of homogeneity in their ideal combinations of wine characteristics, as reflected in the consistent orientation of the ideal vector within the positioning maps. These findings provide valuable managerial insights for identifying unoccupied or "open" spaces in competitive markets, thereby supporting strategies for product differentiation, improved market positioning, and enhanced customer attraction and retention. Beyond managerial implications, the study contributes to a broader understanding of consumer-driven product development in the agri-food sector, emphasizing the role of sensory evaluation and market alignment in fostering sustainable competitiveness and rural economic resilience.

Keywords: Sensory Attributes of Wine, Positioning of Red Wines, Ideal Vector, Discrimination of Red Wines.

Introduction

Consumers' purchasing decisions are influenced by various factors that determine the product they want to buy. Researchers are attempting to study consumers' preferences for different food products, including organic products, specialty meals, eco-friendly products, wine, and other food items [1]. In general, purchasing decisions for such a product can be influenced by both intrinsic characteristics, such as taste and color, and extrinsic characteristics, including brand and country of origin. Managers and marketers are trying to forecast consumer expectations and demands based on consumer preferences for product attributes. Wine is an example of a credence product - one that has quality or other unobservable characteristics that cannot be evaluated even after consumption [2].

It is so because, unlike "regular' products, it has a wide variation in grape varieties, regions, tastes, wine styles, and numerous other factors. Research studies have attempted to help customers make purchasing decisions based on several cues that can predict wine quality. However, these cues vary for each wine, in accordance with general wine knowledge and regional and winery styles [3]. Furthermore, the quality level may vary in various circumstances, including the occasion of consumption [4]. Thus, consumers trying to choose and purchase a bottle of wine usually face complex information and cues on the label, which are not easily assessable for less experienced consumers. While extrinsic cues can be identified and comprehended by customers (e.g., price, label), intrinsic cues that characterize the wine itself (e.g., taste, aroma) are difficult to assess without tasting the wine. In most research in this area, the focus has been on extrinsic cues. In this research, we are focusing solely on the intrinsic characteristics.

One approach to identifying wine quality based on intrinsic characteristics relies on chemical and instrumental analyses of wine attributes. Such characteristics include acidity, color, volatile components, and other aroma-related and measurable attributes. Wine's compositional and sensory profiles are widely documented, and several models have been proposed to identify and classify wine quality and origin based on these profiles [5-9].

This approach provides a common base for analyzing and comparing different wines. Furthermore, some characteristics are not easily measurable. For example, the aroma and sensory attributes of wine are complex and challenging to measure and describe.

Sensory evaluation of wine, therefore, is usually performed by wine experts who evaluate the wine and describe its attributes for potential consumers. It is often wine experts who publish their opinions on a variety of wines in guidebooks, wine magazines, daily newspapers, or other media, and their expertise is typically accepted by producers, retailers, and consumers, providing a basis for quality ratings. These measures, however, are not fully appreciated by the vast majority of consumers, who are the typical buyers of wine. Most of these measurements are not communicated clearly by the industry, and unfortunately, these communications skew towards high-involvement, heavier buyers rather than the vastly larger majority of low-involvement, light, and occasional buyers, on which the success of the wine industry is predicated. Therefore, consumers often rely on other informational sources, such as recommendations from family or friends, as well as their own experiences and perceptions of product quality.

Risk reduction in wine buying and intrinsic products in general is an area of interest. For many buyers, price is a surrogate for a range of intrinsic cues [10]. This type of positive correlation between price and quality is typical in credence-type products (even after tasting a wine, consumers can not be sure that this is the best wine for them unless they taste many wines). Following this notion, the perception of a higher price acts as a proxy for quality, which can reduce risk [11-14]. Another approach to risk reduction is to rely on recommendations from a friend or the seller in the wine store. These recommendations were found to be an important factor in the choice of wine [15,16].

Prior consumer research typically had the extrinsic cues of the wine available to customers in tasting tests (e.g., price, origin, grape variety, or brand name) either separately or in combination [17]. In this research, we employ an alternative approach to contribute to the body of knowledge on risk reduction, utilizing a blind taste assessment to identify relevant and, more importantly, intrinsic characteristics. By excluding all other information cues from these tests, we can identify the relationship between sensory-based intrinsic cues and the preferred combination of important wine characteristics. Using a positioning mapping technique, we identify the relation of each wine to these preferences. This "clean" test and approach offers' winemakers and managers a way to improve the desired qualities of their wine based on consumers' preferences.

As with many food and beverage items, taste is the most important characteristic in decision-making. Specifically in wine, [18] found that the taste of the wine was a dominating factor for wine consumers. found that taste was the most highly correlated attribute with wine choice and noted that this was to be expected as taste is frequently found to be the key attitudinal factor in studies of wine choice [19]. In addition to taste, other intrinsic characteristics of wine were found to be relevant in wine purchasing. Smell is another cue [20].

These studies suggest that some consumers have a relatively straightforward understanding of the importance of intrinsic wine characteristics. By investigating the importance of product attributes for Italian consumers when choosing wine, [21] found that consumers have a clear and precise opinion (low uncertainty) about the importance that they give to the wine in terms of complexity and taste, the aroma/bouquet, the quality-price ratio, the region of origin, and the food-pairing. They concluded that consumers have a clear opinion that taste, bouquet, and price are more important than other wine attributes. Although their research suggests an understanding and preference for the different wine properties, uncertainty still exists, as in most cases, there are no opportunities for tasting. Since taste is the more dominant risk reduction factor in choosing a wine [22] and almost all purchase situations do not include the opportunity to taste the wine before purchase, so having previously tasted the wine is important in wine selection [23].

Prior research highlights the importance of taste and other sensory-based characteristics in wine evaluation. It is, therefore, important to identify these sensory-based attributes and, more importantly, the interplay between them that can describe a wine's overall evaluation. A better understanding of such relationships can facilitate more accurate competitive analysis between wines based solely on sensory evaluation. Adding preference to this analysis can provide information on what characteristics can be changed to decrease a potential gap between a particular wine and consumer preferences. Using this analytical approach, producers can design a marketing strategy to improve their market standing by adjusting sensory-based wine characteristics, potentially increasing the preference for their wine. Such a strategy might be more effective and efficient than other techniques because it is more appropriate for measuring the choices of less experienced consumers.

The primary objective of this study is to identify the sensory attributes of red wine that are most significantly associated with consumers' purchasing decisions and the interplay between these attributes and consumers' preferences. To minimize potential confounding effects, we limited this study to generic red wines produced in France for regular consumption, with a similar retail price range (€3.60-€4.20). We employed a blind taste setting to isolate the effect of intrinsic wine qualities.

Methodology

We applied a four-stage approach. In Stage One, we employed perceptual analysis of the different wines, using wine characteristics obtained from the extensive existing literature in this area. This analysis provided insight into whether consumers can differentiate wines in a blind taste test. The second stage was identifying the salient wine attributes in a preference formation process. In the third stage, we constructed a perceptual map. We analyzed consumers' perceptions to find the main pillars of their perceptual structure. We then used the factor scores to map the location of the wines in this two-dimensional space, constructing a perceptual map. This was followed by the fourth stage of creating the positioning map. Here, we superimposed the ideal vector of preference on this map. This was done by regressing the factor scores obtained in the previous step against preference. The ratio between the regression coefficients of the two factors yielded the slope of this vector.

The participants in this study were wine master's students at a French university. Of the 40 initial responses, 39 were valid and included in the analysis, with one excluded due to incomplete information. The tasting experiment took place in a wine-tasting laboratory. Participants were presented with five different red wines simultaneously in five glasses without any identifying information provided.

Among the 39 valid respondents, 21 (53.8%) were male, and 18 (46.2%) were female. All participants were at least 18 years old. A majority of 27 participants (69.2%) were aged between 18 and 24, while the remaining 12 (30.8%) were between 25 and 34. All respondents were students, with most employed either full-time or part-time, except for one who was unemployed. Thirty-five participants (89.8%) reported drinking wine at least twice a week, while only four (10.2%) consumed wine once or less.

Based on prior research, the following intrinsic attributes were used to characterize the wine: color, aroma, bouquet, taste, tannins, harmony (balance), and aftertaste sensation were investigated (see Table 1). This set of wine attributes conforms to the generally accepted rules of wine tasting [24, 25].

Table 1: Wine Attributes that involve wine appreciation [25].

Attribute	Description
1. Color	Whether the wine is very light vs. very dark
2. Aroma	Very light vs. very strong
3. Bouquet	Very light vs. very strong
4. Taste	How does the wine taste, very light vs. very strong
5.Tannic	How tannic is the wine, very low vs. very high
6.Harmony/balance	How balanced is the wine, very low vs very high
7.Aftertaste	How is the length of the wine, very short vs. very long

A blind-tasting method was employed to capture only the sensory qualities of the wine. This experiment analyzed five different red wines from various registered terroirs in the Bordeaux region, which are common and relatively low-priced, to minimize potential confounding effects. Participants were asked to taste the wine and rate the seven wine attributes mentioned above for each wine. Respondents were asked to rate their perceptions of these qualities on an interval scale of 1 (very low level) to 10 (very high level). In addition, respondents were asked to rate their overall evaluation of each of the five wines they tasted.

In Stage One, we investigate whether there are any differences among the five wines based on their wine attributes and overall quality. The results of the Analysis of Variance (ANOVA) are presented in Table 2 with means and standard deviations.

The results show differences in the perception of wine attributes (ANOVA, $p < 0.001$). The results also indicate that participants were able to distinguish between the different wines. Wines 3 and 4 were rated the best overall quality (no significant difference), while all the other wines were rated lower. The overall quality of wine one and wine 2 is similar, and wine 2 is not significantly different from wine 5.

Table 2: ANOVA results of differences in sensory attributes for the five wines (Mean and Standard Deviation)

Attribute	Wine 1	Wine 2	Wine 3	Wine 4	Wine 5	Average of all wines	Sig. level*
Balance/Harmony	4.23^{c}	$4.90^{b,c}$	5.90^{a}	5.85^{a}	$5.36^{a,b}$	5.25	<0.01
	0.28	0.26	0.25	0.23	0.30	0.12	
Aftertaste	4.28^{c}	4.51^{c}	$5.90^{a,b}$	5.83^{a}	$5.13^{a,b}$	5.13	<0.01
	0.31	0.33	0.25	0.27	0.29	0.14	
Taste	$4.56^{a,c}$	$5.15^{a,b,c}$	6.12^{a}	6.33^{a}	5.38^{b}	5.51	<0.01
	0.30	0.23	0.22	0.23	0.27	0.12	
Tannins	4.94^{c}	5.08^{c}	$6.42^{a,b}$	7.00^{a}	5.88^{b}	5.86	<0.01
	0.32	0.26	0.21	0.23	0.26	0.13	
Aroma	5.46^{b}	5.21^{b}	6.49^{a}	6.44^{a}	5.51^{b}	5.82	<0.01
	0.27	0.25	0.24	0.23	0.27	0.12	
Bouquet	5.18^{b}	5.08^{b}	6.42^{a}	6.54^{a}	5.38^{b}	5.72	<0.01
	0.28	0.28	0.25	0.21	0.31	0.13	
Color	5.33^{c}	$6.38^{b,c}$	$7.21^{a,b}$	7.49^{a}	6.64^{b}	6.61	<0.01
	0.25	0.25	0.21	0.23	0.25	0.12	
Overall Quality	4.14^{c}	$4.82^{b,c}$	6.08^{a}	6.00^{a}	5.00^{b}	5.22	<0.01
	0.32	0.31	0.25	0.22	0.28	0.13	

*Significant level among the wines.

The superscripts a, b, and c represent differences in Means. For example, a represents the highest mean for that property in a specific wine, b is the second-highest mean, significantly lower than the highest one but greater than the others, and c has the lowest Mean of all properties in that wine. It is significantly different from the other wines. " ab" indicates no significant difference between these two wines, but a significant difference from the others, and so forth.

The second stage of the analysis examines the relative importance of wine attributes in shaping consumers' preferences for these wines when considering a purchase. A multiple linear regression analysis was conducted using the following functional form.

$$\mathrm{Preference_i} = \alpha_1\mathrm{COLOR_i} + \alpha_2\mathrm{AROMA_i} + \alpha_3\mathrm{BOUQUET_i} + \alpha_4\mathrm{TASTE_i} + \alpha_5\mathrm{TANNIC_i} + \alpha_6\mathrm{HARMONY_i} + \alpha_7\mathrm{AFTERTASTEi}$$

The regression procedure estimated the parameters α1,…,α7 for all subjects tasting red wines. The significant coefficients were derived by applying stepwise regression and are presented in Table 3 below. The data indicate that three wine attributes are salient in the choice process: color intensity, taste, and harmony. In a similar analysis of white wines, [26] reported that taste and harmony were the two salient attributes. As consumers can differentiate wines in a blind taste, wine producers and marketers should focus on these wine attributes. Investing in these attributes could increase consumers' preference for their wines in tandem with better targeting of consumers.

Table 3: Regression coefficients of wine attributes

Wine Attribute	Coefficient	Significant level
Color Intensity	0.210	0.002
Taste	0.217	0.007
Harmony	0.491	0.000

Consumers with a similar background to that in our sample tend to evaluate wines primarily based on their taste and harmony. [27] have reported similar conclusions. Their findings suggest that, for most consumers, the foremost determinant of wine quality appears to be taste, with balance being the second most important characteristic [27].

The third stage in the analysis was identifying the perceptual structure in the respondents' perceptual sensory evaluations. It enabled the identification of variables contributing to the common perceptual variance among the measured attributes. Therefore, a Principal Component Analysis (PCA) with Varimax rotation and Kaiser Normalization was needed to obtain this information. The analysis yielded two main factors, explaining 68.4% of the variance. The rotated factor structures and the item loadings are presented in Table 4 (only factor loadings above .4 are presented). The two factors derived from the data can be interpreted as representing the 'taste' aspects, as they describe the mouthfeel of wine, and the second factor as representing the 'color and aroma' aspects of the wine, which are related to other sensory characteristics, including the color of the wine.

We then used the two factors to construct a two-dimensional map, which resulted in factor scores determining each wine's position on this map. Figure 1 presents consumers' perceptions of the five wines based on the aggregate response of the whole sample. The different shapes on the map represent the specific locations of various wines.

A perceptual map evaluates the similarities and differences between wines based on the two main perceptual pillars to determine their competitive position. The closer two wines are to one another, the more similar they are in terms of their characteristics. Therefore, they compete with each other and vice versa. As can be seen in Figure 1, each wine has a distinct position, with wines 3 and 4 being positioned high on the 'taste' and high on the 'color and aroma' aspects of the wine. In this respect, their relative proximity suggests that they are similar and can be substitutable for consumers. Wine 5 is positioned low on the 'color & aroma' dimension and near the average on the 'taste' aspects, while wines 1 and 2 are positioned low in both dimensions. These three wines are not differentiated by aroma but by taste dimension.

Table 4: Factor loadings of wine attributes (only factor loadings above .4 are presented)

Wine Attribute	Factor	
	1	2
Harmony	0.827	
Aftertaste	0.812	
Taste	0.733	0.479
Tannins	0.719	
Aroma		0.906
Bouquet		0.836
Color	0.403	0.431

The superscripts a,b and c represent differences in means.

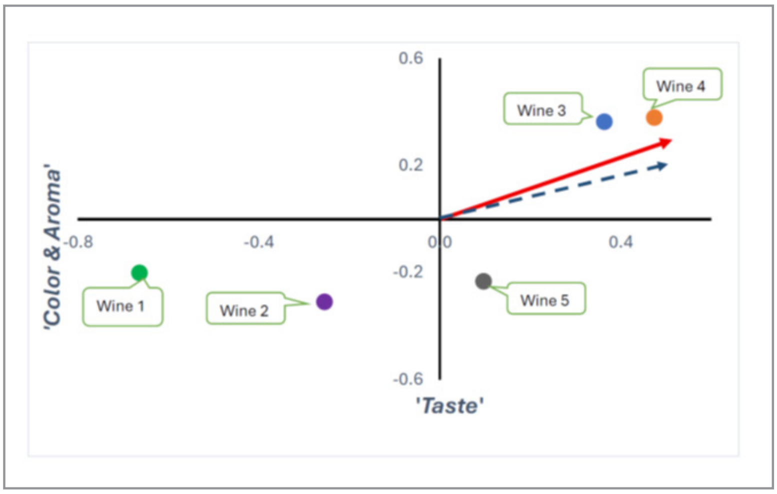

Figure 1: Perceptual and positioning preference-based in two dimensions: 'taste' and 'color & aroma'.

Figure 1: describes respondents' perceptions of the different wines. However, it does not provide insight into consumers' preferences for wine on their own. Therefore, the fourth stage of the analysis was calculating and analyzing the 'ideal vector' that represents the relative effect of the two factors on the desired positioning of an ideal wine (see, for example [28, 29].

The 'ideal vector' captured the trade-offs between wine factors that indicate how consumers react to potential changes in their perceptual evaluation. This represents the proximity of each wine's perceptual position to its ideal preference. Since the vector indicates the ideal combination of both factors that consumers prefer when considering wine, the closer the position of the wine is to the 'ideal vector,' the closer it aligns with consumers' preferences. The 'ideal vector' was derived by regressing the factor scores against the preferences of consumers for the four different wines with the following functional form:

$$\text{Prefrence} = \beta 0 + \beta 1 \cdot' \text{Taste}' + \beta 2 \cdot' \text{Color\&Aroma}'$$

Where 'Taste' - scores of factor 1 and 'Color&Aroma' scores of factor 2.

The results of this analysis yielded the following relations: Preference=5.22+1.11'Taste'+0.51'Color & Aroma' ($p<0.001$).

The high values of the 'taste' coefficients indicate that consumers tend to prefer wine based on its 'taste' attributes rather than on 'color & aroma' attributes.

Using the ratio of the β1 and β2 coefficients enable us to draw the ideal vector and superimpose it on the two-dimensional space map. Adding this vector to the map, as shown in Figure 1, provides more insight into the relationship between perceptions and preferences. As noted earlier, the closer a specific wine is to this vector, the more suitable it is for consumers' tastes. Figure 1 indicates that wines 3 and 4 are the closest to this vector (solid arrow). Winemakers can use this analysis to create wines closer to this ideal vector by adjusting the sensory attributes accordingly through both viticultural and oenological decision-making.

To check the robustness of the results, we used a jackknife-type analysis. The factor scores were regressed against preference for four wines at a time, and each run used a different combination of wines. The results and the slopes of the ideal vector are presented in Table 5.

Table 5: Summary of Regression Coefficients for Different Wine Groups

Group of wines	β1 'taste'	β2 'color & aroma'	β2/β1 The slope of the ideal vector
1. wines 1,2,3,4,5	1.107	.513	0.463
2. wines 2,3,4,5	1.154	.526	0.456
3. wines 1,3,4,5	1.108	.627	0.566
4. wines 1,2,4,5	1.054	.526	0.499
5. wines 1,2,3,5	1.130	.502	0.444
6. wines 1,2,3,4	0.908	.731	0.805

The results show that the ideal vector remains in the same direction and has similar relative importance, with the relative importance of taste being more significant than that of the color/aroma factor.

As the value of the ideal vector's slope increases, consumers tend to prefer 'color & aroma' attributes. The slope of the ideal vector for wine group 6 is 0.805, higher than all other wine groups (Table 5), while the slope of the ideal vector for all other wine groups is between 0.444 and 0.566. This can be attributed to a lower perceptual 'taste' and/or better 'aroma & color'. However, the selection of the French participants may be inadequate, given the relatively small sample size.

The results of this study are compared to those of another study by [25] In that study, four bottles of wine wrapped in brown paper were presented simultaneously to participants without any information about the wine. Randomly mixing the alternative wines across participants was conducted to avoid potential primary or recency effects. Overall, four generic red wines of different brands were tested. These wines were selected because consumers typically purchase them in Israel for personal use at home. Subjects were asked to taste the wine and rate each sensory wine attribute as described in Table 1.

The ideal vector for the Israeli data is depicted in Figure 1 (dashed line) and the slop of the ideal vector is a smaller amount than the French one. As the value of the slope of the ideal vector of the French wines are higher than the Israeli wines, French consumers tend to prefer 'color and aroma' attributes. The high values of the 'taste' coefficients indicate that consumers tend to prefer wine based on its 'taste' attributes rather than on 'color & aroma' attributes.

Comparing the two studies, French participants might have more experience with wine and appreciate it for its taste and other sensory characteristics. While taste remains a key factor, this cohort seems open to exploring a broader range of sensory attributes.

Conclusion

Understanding the perceptions and preferences of wine consumers of different wines is of great importance for winemakers and marketers. Thus, an analysis that considers the competitive position of various wines, taking into account consumers' perceptions and preferences, can provide valuable information for formulating a marketing strategy to attract consumers. It is also a way the wine businesses can work towards better communicating the intrinsic aspects of wine to help potential consumers reduce the perceived risk of purchasing. Our analysis of the perceptual mapping of five different French red wines, along with the superimposed ideal vector, provides an approach to achieving this. Constructing a map that reflects the positioning of a commercial entity allows managers to achieve two main objectives in defining their marketing strategies.

The primary objective is to gain a deeper understanding of their firm's competitive positioning in relation to rival firms. In addition, by studying this map, winery managers and winemakers can identify open spaces in the competitive environment, allowing them, for example, to reposition themselves as more attractive than their competitors. Another important advantage of such analysis is evaluating the current version of a wine relative to consumers' ideal combination of 'taste' and 'aroma & color'. Thus, providing mapping tools for retailer positioning can enhance managers' ability to improve their business, attract, and retain customers.

For example, the homogeneity in consumers' wine preferences suggests that marketers should primarily focus on altering consumers' perceptions of their wines. [25,26] concluded that the differences in segment-level analysis might indicate some sensory differences between the examined segments. Marketers can, therefore, try to influence consumers' perceptions by relating some of the taste items to non-tangible aspects of a brand, which reflects the producer's reputation [30].

Since there is relatively limited literature available in this area, this research aims to expand the existing knowledge base on this topic [31]. As such, it is somewhat exploratory in nature, and no hypotheses were developed. Future research should extend the results to other wines and consumer segments using larger sample sizes. In doing so, these studies could contribute new knowledge and highlight the dimensions and the position of the ideal vector [32].

References

1. Heiman, A., & Lowengart, O. (2011). The effects of information about health hazards in food on consumers' choice process. Journal of Econometrics, 162(1), 140–147.
2. Balafoutas, P., & Kerschbamer, R. (2020). Credence goods in the literature: What the past fifteen years have taught us about fraud, incentives, and the role of institutions. Journal

of Behavioral and Experimental Finance, 26, 100285.
3. Horowitz, I., & Lockshin, L. (2002). What price quality? An investigation into the prediction of wine-quality rating. Journal of Wine Research, 13(1), 7–22.
4. Quester, P. G., & Smart, J. (1998). The influence of consumption situation and product involvement over consumers' use of product attribute. Journal of Consumer Marketing, 15(3), 220–238.
5. Cliff, M. A., & Dever, M. C. (1996). Sensory and compositional profiles of British Columbia Chardonnay and Pinot Noir wines. Food Research International, 29(3–4), 317–323.
6. Koussissi, E. M., Dourtoglou, V. G., Ageloussis, G., Paraskevopoulos, Y., Dourtoglou, T., Paterson, A., & Chatzilazarou, A. (2009). Influence of toasting of oak chips on red wine maturation from sensory and gas chromatographic headspace analysis. Food Chemistry, 114, 1503–1509.
7. Kwan, W.-O., & Kowalski, B. R. (1980a). Pattern recognition analysis of gas chromatographic data: Geographic classification of wines of Vinis vinifera cv. Pinot Noir from France and the United States. Journal of Agricultural and Food Chemistry, 28(2), 356–359.
8. Kwan, W.-O., & Kowalski, B. R. (1980b). Classification of wines by applying pattern recognition to chemical composition data. Journal of Food Science, 43(4), 1320–1323.
9. Vanier, A., Brun, O. X., & Feinberg, M. H. (1999). Application of sensory analysis of champagne wine characterization and discrimination. Food Quality and Preference, 10(2), 101–107.
10. Zeithaml, V. A. (1988). Consumer perceptions of price, quality, and value: A means–end model and synthesis of evidence. Journal of Marketing, 52(3), 2–22.
11. Angulo, A. M., Gil, J. M., Gracia, A., & Sanchez, M. (2000). Hedonic prices for Spanish red quality wine. British Food Journal, 102(7), 481–493.
12. Combris, P., Lecocq, S., & Visser, M. (1997). Estimation of a hedonic price equation for Bordeaux wine: Does quality matter? Economic Journal, 107(441), 390–402.
13. Oczkowski, E. (1994). A hedonic price function for Australian premium table wine. Australian Journal of Agricultural Economics, 38(1), 93–110.
14. Wade, C. (1999). Reputation and its effect on the price of Australian wine. Australian & New Zealand Wine Industry Journal, 14(4), 82–84.
15. Cohen, E. (2009). Applying best–worst scaling to wine marketing. International Journal of Wine Business Research, 21(1), 8–23.
16. Goodman, S. (2009). An international comparison of retail consumer wine choice. International Journal of Wine Business Research, 21(1), 41–49.
17. Lockshin, L., & Hall, J. (2003, July). Consumer purchasing behaviour for wine: What we know and where we are going. International Wine Marketing Colloquium, Adelaide. Available at http://academyofwinebusiness.com/wp-content/uploads/2010/05/File-030.pdf
18. Koewn, C., & Casey, M. (1995). Purchasing behaviour in the Northern Ireland wine market. British Food Journal, 97(1), 17–20.
19. Thompson, K. E., & Vourvachis, A. (1995). Social and attitudinal influences on the intention to drink wine. International Journal of Wine Marketing, 7(2), 35–45.
20. Caissie, A. F., Riquir, L., De Revel, G., & Tempere, S. (2021). Representational and sensory cues as drivers of individual differences in expert quality assessment of red wines. Food Quality and Preference, 87, 104032.
21. Corduas, M., Cinquanta, B., & Ievoli, C. (2013). The importance of wine attributes for purchase decisions: A study of Italian consumers' perception. Food Quality and Preference, 28(2), 407–418.
22. Mitchell, V., & Greatorex, M. (1988). Consumer risk perception in the UK wine market. European Journal of Marketing, 22(9), 5–15.
23. Goodman, S., Lockshin, L., & Cohen, E. (2006). What influencing consumer selection in the retail store? The Australian and New Zealand Grapegrower and Winemaker, 515, 61–63.
24. Kolpan, S., Smith, B. H., & Weiss, M. A. (1996). Exploring wine. New York, NY: Van Nostrand Reinhold.
25. Lowengart, O. (2010). Heterogeneity in consumer sensory evaluation as a base for identifying drivers of product choice. Journal of Business and Management, 16(1), 37–50.
26. Cohen, E., & Lowengart, O. (2003). Exploring consumers' wine preferences. In Australian and New Zealand Marketing Academy (ANZMAC) 2003 Proceedings (pp. 269–263).
27. Charters, S., & Pettigrew, S. (2007). The dimensions of wine quality. Food Quality and Preference, 18(6), 997–1007.
28. Urban, G., & Hauser, J. R. (1993). Design and marketing of new products (2nd ed.). Englewood Cliffs, NJ: Prentice Hall.
29. Tractinsky, N., & Lowengart, O. (2003). E-retailers' competitive intensity: A positioning mapping analysis. Journal of Targeting, Measurement and Analysis for Marketing, 12(2), 114–136.
30. Balafoutas, P., & Kerschbamer, R. (2020). Credence goods in the literature: What the past fifteen years have taught us about fraud, incentives, and the role of institutions. Journal of Behavioral and Experimental Finance, 26, 100285.
31. Horowitz, I., & Lockshin, L. (2002). What price quality? An investigation into the prediction of wine-quality rating. Journal of Wine Research, 13(1), 7–22.
32. Lockshin, L., Quester, P., & Spawton, T. (2001). Segmentation by involvement or nationality for global retailing: A cross-national comparative study of wine shopping behaviors. Journal of Wine Research, 12(3), 223–236.

Copyright: *©2025 Eli Cohen, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.*