

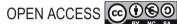
Selection of wines for wine lists in restaurants of Bosnia-Herzegovina: A comparative study

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Abstract

This study examines the wine list strategy preferences among restaurateurs in Bosnia and Herzegovina, focusing on identifying which criteria are deemed most and least important. A structured analysis categorizes strategies based on their frequency of selection as "Most Important" and "Least Important," establishing a clear hierarchy of value among various criteria. The findings highlight two predominant strategies: "Preference for local wine" and "High reputation brand," which is significant in the decision-making process. Restaurateurs consistently prioritize these strategies, with a dual emphasis on promoting local wine traditions and responding to market demands for reputable brands. The study underscores a pragmatic approach among Bosnian-Herzegovinian restaurateurs, who prioritize familiarity and perceived market security in their wine selections, potentially at the expense of enhancing gastronomic experiences and customer education. Further analysis using Z-scores confirmed the statistical significance of these findings, identifying Strategy Choices 4 and 6 with notably high Z-scores, indicating their distinct importance compared to other criteria. This quantitative approach enhances the understanding of how these strategies stand out within the surveyed context, emphasizing their relevance in shaping wine list strategies. The study contributes insights into the strategic decision-making processes of Bosnian-Herzegovinian restaurateurs regarding wine selection, highlighting the dominance of local wine preference and brand reputation considerations. It underscores potential areas for improvement in integrating gastronomic expertise and enhancing customer experiences, suggesting avenues for future research and strategic refinement in the local restaurant industry.

Keywords: Bosnia and Herzegovina; brand reputation; criteria preferences; local wine preference; restaurateurs; wine list strategy

Introduction

Consumers are becoming increasingly knowledgeable and demanding about wines (Ruiz Vega *et al.*, 2004). Their lifestyle, personality, social status, and desire for self-expression greatly influence their purchasing decisions, and these factors should be reflected in restaurant marketing, including wine list design (Diez, 2007).

Restaurants have a significant opportunity for market differentiation through wine selection, as pairing food with suitable wines can enhance the gastronomic experience and boost wine sales, which are crucial for a restaurant's success (Aune, 2002; Manske and Cordua, 2005; Yuksel and Yuksel, 2002). Wine complements food ideally, as proper pairings enhance the flavors of both without overshadowing each other (Gagic and Ivkov, 2013). Research in 52 upscale Spanish restaurants in Valencia found that pairing recommendations increased sales of target wines by 44.5% (Wansink *et al.*, 2006).

Even in countries not traditionally known for wine production, such as Mexico, wine can drive substantial economic growth. Local wines, with their unique profiles, complement the diverse ingredients and flavors of Mexican cuisine, enriching the dining experience and supporting the spread of various cultural techniques and traditions (Castro-Palafox *et al.*, 2023). Similarly, in Taiwanese restaurants, food pairing—especially when noted on the wine list—is a key driver of wine purchases. Peer opinions, reference groups, and wine education play crucial roles in purchasing decisions, indicating that wine is becoming increasingly fashionable, particularly among younger adults (Agnoli and Outreville, 2023).

Social media also plays a vital role in boosting wine sales through carefully curated content that educates customers without overwhelming them (McMullan *et al.*, 2022). A study in Italy and France found that younger customers with high levels of wine engagement are more likely to participate in wine clubs, sommelier associations, and slow food communities, presenting a promising market niche for sophisticated and sustainable wine consumption practices (Vecchio *et al.*, 2024).

Cost plus and competitive pricing

Maximizing profit remains a crucial consideration for restaurateurs (Sirieix *et al.*, 2011), with wine being a particularly significant profit driver for restaurants due to its typically higher markup compared to food (Walker, 1998).

The profitability of a wine list is closely tied to the markup applied, which can exceed 200%, especially for more affordable wines (Livat and Remaud, 2018). A survey by Amspacher (2011) revealed that wines priced at ϵ 50 or more carry an average markup of 111%. Restaurants often apply higher markups because they anticipate that customers will underestimate these percentages (Cuozzo, 2015).

Training staff in wine knowledge

Critical factors driving customers' wine-purchasing decisions and loyalty include staff competence, friendliness, and the ability to understand customer demands (O'Neill *et al.*, 2002). Professional training is therefore crucial for maintaining and enhancing the quality of the wine experience (Carlsen, 1998). Given the close link between enology and gastronomy, those involved in food preparation and service need strong culinary knowledge in addition to familiarity with wine varieties and characteristics (Ivkov *et al.*, 2012).

The establishment of organizations like the Court of Master Sommeliers in the 1970s aimed to elevate beverage knowledge and service standards in hotels and restaurants, leading to advancements in wine education and service across various sectors (Aspler, 1991). Key competencies of sommeliers include pairing wines with food for optimal sensory quality (Scander et al., 2020) and transforming customers into connoisseurs, which influences their sense of prestige and spending habits (Fele and Gigioli, 2020). Essential traits for sommeliers include empathy, credibility, self-assurance, responsiveness, passion, approachability, commitment, and a desire for continuous learning, all of which are likely to boost customer satisfaction and loyalty (Taylor et al., 2023). As wine sellers, sommeliers should also be skilled storytellers, inspiring customers through their sales pitch (Bulic, 2021; Honoré-Chedozeau et al., 2024). Additionally, sommeliers should consider the association between wine preferences and sociodemographic factors (such as gender, age, and wine expertise) as well as personality traits (including extroversion, sociability, emotional stability, and open-mindedness). For example, extroverts tend to prefer more acidic wines, sociable individuals favor wines with high alcohol content and complex bouquets, emotionally stable people like tannic, full-bodied wines, and open-minded individuals enjoy flavorful wines with high tannicity while disliking sapidity. These preferences are generally consistent across genders and should be used as general guidelines when assisting customers with their wine choices (Burro et al., 2022).

Restaurants with sommeliers experience increased wine sales. Research on 14 restaurants in Texas showed that those with wine stewards or sommeliers had a 69% higher average sales per square foot compared to those without (Manske and Cordua, 2005). A survey of 250 US sommeliers identified key factors for a good wine list as including price, customer requests, restaurant food offerings, wine-brand reputation, value for money, vintage, purchasing trends, profitability, personal preference, and variety type (Ben Dewald, 2008). This reflects a sophisticated approach to wine list design, balancing market-driven strategies with personalized elements.

Perceived risk

Customers' wine-purchasing decisions are influenced by factors such as perceived risk, which includes uncertainty and anxiety (Lacey *et al.*, 2009). To simplify their choices, customers often rely on expert opinions, which guide their decisions and spending habits (Cardebat and Livat, 2016) and are increasingly accurate in describing wine properties and categories (Croijmans *et al.*, 2020).

A study of Australian, UK, and French wine consumers found that "match with food" and "already tasted it" are the most important criteria for selecting wines, serving as risk-reduction strategies (Cohen *et al.*, 2009). Expert

staff recommendations for pairings enhance the experience and reduce uncertainty in wine choices (Wansink *et al.*, 2006).

Research from the UK identifies four types of risk in wine purchasing: functional, social, financial, and physical (Mitchell and Greatorex, 1989). Social risk includes the pressure to impress others with expensive wines, sometimes solely driven by a desire to stand out (Ritchie, 2007). Regret from a poor choice, coupled with negative feedback from companions, can be alleviated by knowledgeable staff (Deng *et al.*, 2023).

Uncertainty in wine selection often arises from limited information, high prices, and customer experience (Batt and Dean, 2000). To assist customers in making informed decisions, three key risk-reduction strategies are recommended: wine tasting, sommelier recommendations, and free samples (Mitchell and Greatorex, 1989). Research by Ruiz-Molina *et al.* (2010) indicates that effective sales techniques by knowledgeable staff can increase wine sales by 10–25%.

Wine list design

Enhancing customer satisfaction and restaurant's prestige and value requires regular updates of wine lists (Gil et al., 2008; Wansink et al., 2006). Including well-known wine brands can significantly enhance customer satisfaction, as many prefer popular wines to reduce perceived risks (Hall et al., 2001). Organizing the wine list by style is also appreciated by consumers (Staub and Siegrist, 2022).

The wine list is often viewed as a crucial strategic document by restaurateurs and is rarely shared with competitors. Swiss research shows that restaurateurs are more willing to disclose wine lists when competition is limited or if the list lacks specific details that competitors could exploit. High-end restaurants generally share less information compared to casual ones, indicating a deliberate strategy, particularly if they have established sommeliers with strong winery connections (Gergaud *et al.*, 2024).

As wine consumption is perceived as an aesthetic experience and a reflection of personality, the appearance of the wine list can set a restaurant apart from its competitors. While earlier studies suggested appearance had little impact (Bowen and Morris, 1995), recent research shows that elements such as colors, illustrations, fonts, and paper quality can boost sales and improve the restaurant's image (Charters and Pettigrew, 2005). A study using braincomputer interface technology found that well-designed wine menus positively influence cognitive function and consumer behavior, suggesting that richer content is more effective than traditional lists (Reynolds, 2024).

The wine list enables restaurateurs to showcase their restaurant's personality and culinary style (Corsey, 2006; Gil et *al.*, 2008), enhancing the sense of locale and appealing to an educated global audience by mediating complex relationships between wine, culture, and place (Hill and Fountain, 2022; Kubát *et al.*, 2024; Pearson *et al.*, 2024).

Selecting wines carefully and training waitstaff in wine knowledge are consistently emphasized (Aspler, 1991; Brown, 2003, pp. 257–259; Dodd, 1997; Granucci, 1994). Among top-ranked restaurants, user-generated content highlights the importance of service, food quality, and wine, suggesting restaurateurs should focus on food quality, wine steward education, and a well-curated wine list paired with food (Cassar *et al.*, 2020).

Research in France indicates that restaurateurs prioritize selecting wines based on taste, pairing them with food, having a sommelier, and offering competitive pricing. Market-driven strategies, like featuring popular wines, are less important, reflecting France's established wine culture and tradition of quality protection (Candiago *et al.*, 2024; Sirieix and Remaud, 2010).

Research aim

Based on the literature review, it is clear that wine lists are crucial to a restaurant's differentiation strategy and business success. Restaurateurs must prioritize the design of their wine lists to achieve positive results. Additionally, the importance of wine lists is highlighted by wine and food pairing, which enhances the overall customer experience. Wine lists should be meticulously crafted: comprehensive yet concise, easy to understand, and presented by knowledgeable staff. Strategic pricing, considering the perceived risk from the customer's perspective, also affects profitability. All these factors play a significant role in influencing wine sales and profitability for restaurants.

This study aims to gain a deeper understanding of the strategies used by restaurateurs in Bosnia-Herzegovina when selecting wines for their wine lists. Given that similar studies have been conducted in countries such as France, Australia, the US, China (Sirieix *et al.*, 2011; Sirieix and Remaud, 2010), and Croatia (Knežević, 2020), assessing the local market's position relative to established industry benchmarks is deemed valuable.

Materials and Methods

Research design

The literature review identified 11 potential strategy choices for wine list design, categorized as either

restaurateur-driven or market-driven based on previous research (Knežević, 2020; Sirieix and Remaud, 2010). The same taxonomy of strategic choices is used as presented in Table 1. The statistical analysis method, a Youden-type balanced incomplete block design, was slightly adjusted to better understand the context in Bosnia-Herzegovina. This modification facilitated comparisons with prior research findings in France, Croatia, and potentially other countries, as noted in earlier studies.

Youden-type balanced incomplete block explained

A Youden-type balanced incomplete block design (BIBD) is a statistical method that arranges strategy choices in blocks, ensuring each choice appears in a balanced manner. This design guarantees that every choice is compared against each other choice an equal number of times. It was particularly useful in this research because presenting all 11 wine list strategy choices in every block would have been impractical and confusing for respondents (Bailey, 2008).

In this method, not all strategy choices appear in each block, but every pair of choices appears together in a block the same number of times. This approach ensures robust and unbiased comparisons by allowing each choice to be compared equally with every other choice. The design is especially advantageous for handling a large number of strategy choices with limited resources, making it ideal for the described research scenario.

Application in the study or mathematical conditions for designing the questionnaires

Herewith, we present the variables and their relationships for a Youden-type BIBD. For a Youden-type BIBD, the following relationships must hold:

$$b \times k = v \times r$$

$$r * (k - 1) = \lambda * (v - 1)$$

Table 1. Strategies underlying restaurateurs' choice of wines for wine list.

Restaurateurs preference	Market driven or supplier driven choice
0. Matching wine with food menu	5. Well known brand
1. Tastes good	6. High-reputation brand
Competetive price fit forthe price of food	7. I rely on my supplier's recommendations
3. Maximize profit	8. Balance of varieties
4. Preference for local wine	9. Not available in retail stores
	10. Popular wines (can sell a lot)

The variables are explained as follows with our specific application.

v: 11 strategy choices

B: 11 questionnaires

r: Each strategy appeared an equal number of five times across all questionnaires

k: Each questionnaire included a subset of five strategies

 λ : = 2 (each pair appeared together twice)

Example of the choice task

Consequently, a Youden-type BIBD was used to include the 11 strategies presented above in 11 questionnaires created according to the above-described Youden incomplete block calculation and distributed to restaurateurs. Respondents were asked to choose one strategy they considered the most important and one they considered the least important from a given choice. A sample questionnaire is presented in Table 2.

Sample

In this study, 110 restaurateurs from 26 towns in Bosnia-Herzegovina (Sarajevo 44, Goražde 9, Jablanica 8, Bosanski Petrovac 7, Visoko 5, Tuzla 4, Trebinje 3, Mostar 3, Konjic 3, Bjelašnica 3, Bijeljina 3, Banja Luka 3, Kreševo 2, Bihać 1, Zenica 1, Rogatica 1, Podlugovi 1, Pale 1, Livno 1, Laktaši 1, Kiseljak 1, Jelah 1, Istočno Sarajevo 1, Doboj 1, Brčko 1, Bosanska Krupa 1) participated. This contrasts with the study by Sirieix and Remaud (2010), which included 68 respondents from four French towns (Montpellier, Toulouse, Paris, and Lyon), and Knežević (2020), which included 110 restaurateurs from Dubrovnik and Split, Croatia. The literature review revealed that no study of this kind has ever been conducted in Bosnia-Herzegovina. The questionnaires were collected in the spring of 2024.

Analysis

During the analysis, we ranked the results by the frequency of scores ("Most Important" and "Least Important")

Table 2. Example of a choice task.

Least Important	Choice criteria	Most important
Χ	1. Tastes good	
	3. Maximize profit	
	4. Preference for local wine	
	5. Well-known brand	
	9. Not available in retail stores	Χ

and net scores, creating a clear hierarchy of the strategies. We also calculated Z-scores, which indicate how many standard deviations a data point is from the mean. High Z-scores suggest a data point is significantly above the mean, indicating it may be an outlier or notably different from the average.

Positive Z-scores: Indicate a strategy is chosen more often than average as the most important.

Negative Z-scores: Indicate a strategy is chosen less often than average.

In summary, strategies with the highest Z-scores are statistically more likely to be chosen as the most important, highlighting the standout choices among respondents. We also calculated the normalized Z-score by subtracting the mean from the data point and dividing by the standard deviation. This expressed the position of a data point relative to the mean in terms of standard deviations, helping us understand how extreme or typical a data point was within the distribution. Based on this approach, we categorized strategic choices as follows: 100–80: Very important; 79, 99–60: Important; 59, 99–40: Neutral; 39, 99–20: Not important; 19, 99–0: Irrelevant.

Results

Score frequency

In the initial analysis, we evaluated the wine list strategy choices by categorizing them as "Most Important" (likely the most frequently used), "Least Important" (least frequently used), and by calculating the "Net Score," which is the difference between the two (subtracting "Least Important" from "Most Important").

Table 3. Strategy choices ranking.

Strategy	Most Important	Least Important	Net score	
4	24	2	11	
6	10	1	19	
1	12	3	9	
0	15	7	8	
5	8	8	0	
8	8	8	0	
2	7	12	-5	
10	7	12	-5	
9	2	12	-10	
3	3	21	-18	
7	4	24	-20	

In this instance, the results indicate three groups.

- 1. Top strategies: (High Net Scores)
 - Strategies 4 and 6 are the most highly valued strategies with the highest net scores, indicating they are frequently considered the most important and rarely the least important.
 - Strategies 1 and 0 also have positive net scores, indicating they are more often seen as important than unimportant.
- Neutral strategies (Net Score of 0)
 Strategies 5 and 8 have equal counts for most and least important, indicating mixed opinions.
- 3. Least value strategies (Net Score of 0)
 Strategies 2 and 10 have slightly negative net scores.
 Strategies 9, 3, and 7 have significantly negative net scores, indicating they are frequently considered the least important.

These results provide a clear ranking of the strategies from most to least valued, based on the collected responses. The individual rankings of the "Most Important" and "Least Important" strategies closely align with the "Net Score" ranking, confirming the reliability of the results. A visual representation of the data helps to better understand the distribution of the "Most Important" and "Least Important" strategies, as well as the net scores for each. The blue bars represent the counts of strategies selected as "Most Important," while the red bars represent those selected as "Least Important."

The green bars represent the net scores for each strategy, calculated by subtracting the "Least Important" count from the "Most Important" count, providing a clear view of which strategies are overall more valued (positive net scores) and which are less valued (negative net scores).

Z-scores

In addition to ranking the results by frequency of scores ("Most Important" and "Least Important") and "Net Scores," which provides a clear hierarchy of the strategies from most to least valued, we also calculated the Z-scores. Z-scores represent the number of standard deviations from the mean. High Z-scores indicate a data point is significantly higher than the mean, suggesting it is an outlier or significantly different from the average.

A high positive Z-score means the data point is much higher than the mean, indicating that a particular strategy is chosen significantly more often as the most important. Conversely, a negative Z-score means the data

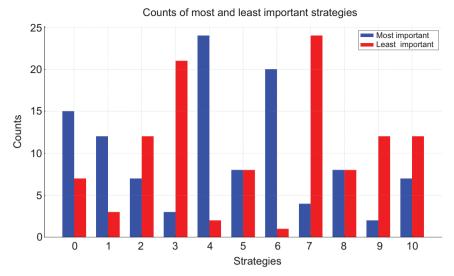


Figure 1. Counts of most and least important strategies.

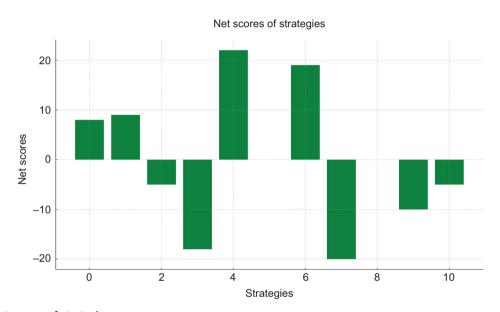


Figure 2. Net scores of strategies.

point is below the mean, indicating the strategy is chosen less often than average.

Strategies with the highest Z-scores, such as Strategies 4 and 6, are statistically more likely to be selected as the most important, highlighting their prominence in respondents' choices. Conversely, strategies with negative Z-scores are less likely to be chosen as the most important.

Normalized Z-scores

We calculated the normalized Z-score by subtracting the mean from each data point and dividing by the standard deviation. This score indicates how far a data point is from the mean in terms of standard deviations, helping to assess the extremity or typicality of the data within the distribution.

Based on this, we developed a scale to categorize the normalized Z-scores from 1 to 100, highlighting the relevance of each strategy:

- Very important (80–100): Strategies in this range are very likely to be chosen as the most important.
- Important (60–79): These strategies are often chosen as important but less frequently than those rated "Very Important."
- Neutral (40–59): These strategies are moderately chosen, neither highly favored nor dismissed.

Table 4. Z-scores and categorization.

Ranked order	Strategy choice #	Strategy choice	Restaurater- driven choice	Marllet-driven choice	Most important z-score	Normalized z-score	categorizaation
1	4	Preference for local Wine	Х		2,076536	100	Very important
2	6	High reputation brand		Χ	1,483240	81,818182	Very Important
3	1	Tastes good	Χ		0,741620	59,090909	Neutral
4	0	Matching wine with food menu		Χ	0,295548	45,454545	Neutral
5	5	Well known brand		Χ	-0,295548	27, 272727	Not important
6	8	Balance of varieties		Χ	-0,295548	27, 272727	Not important
7	2	Price fit for the price range of food	Χ		-0,444972	22,727273	Not important
8	10	Popular wine (can sell a lot)		Х	-0,444972	22,727273	Not important
9	9	Not avallable in retail stores		Х	-0,839944	9,090909	Irrelevant
10	3	Maximize profit	Χ		-1,033268	4,545455	Irrelevant
11	7	I rey on my suppluer recommendation		Х	-1,186592	0	Irrelevant

- Not important (20–39): These strategies are less likely to be chosen as important.
- Irrelevant (0–19): Strategies in this range are very unlikely to be chosen as important and are often viewed as the least important.

Overall, only Strategy Choices 4 (Preference for local wine) and 6 (High reputation brand) are rated as important by restaurateurs when creating wine lists. Strategy 1 (Tastes good) is somewhat important, while all other strategies are not particularly relevant.

Discussion

By frequently choosing the strategic options of "Preference for local wines" and "High reputation brands," restaurateurs in Bosnia-Herzegovina show a clear focus on selecting locally renowned wines for their wine lists. While their personal sensory preference ("Tastes good") is somewhat important (rated "Neutral," very close to "Important"), other criteria are less commonly used. For example, "Matching wine with the food menu" is also ranked as "Neutral" but closer to "Not Important."

Given that most of the surveyed restaurants are casual and do not employ trained sommeliers, this reflects a broader trend in the local restaurant industry. These establishments likely lack the capacity for elaborate wine and food pairing. As a result, "Matching wine with the food menu" is probably more of a vague concept than a well-developed strategy, although recent comparative

studies emphasize its crucial role in creating an effective wine list (Livat *et al.*, 2024).

Among the most utilized strategies in Bosnia-Herzegovina's emerging wine market are those driven by restaurateurs' preferences and market influences. "Tastes good" and "Preference for local wines" reflect restaurateurs' tastes, while "High reputation brand" represents a market-driven approach. This dual strategy highlights a strong focus on local wine traditions alongside an awareness of market trends and consumer preferences.

Given the country's limited wine knowledge and offerings, this approach is understandable. Restaurateurs use these strategies to boost restaurant sales, assuming their clientele prefers familiar varietals and reputed brands, thus minimizing perceived risks. However, focusing mainly on minimal customer education and storytelling might lead businesses to miss opportunities to enhance sales and reputation (Honoré-Chedozeau *et al.*, 2024). Introducing improved customer education, international brands, and a greater emphasis on wine experiences could foster new trends and strengthen the market position (Bulić, 2022). It is also important to note that a significant portion of wine consumers actively seek information during their purchases (Risius *et al.*, 2019).

Comparative highlights

Our interpretation aligns with previous studies in more advanced wine markets. Sirieix *et al.* (2011) found that

French, Australian, American, and Chinese restaurateurs prioritized criteria such as "Matching wine with the food menu," "Wine that tastes good," "Competitive price fit for the food's price range," and "Balance of varieties." This indicates a strategic focus on customer experience, restaurant identity, and profitability through customer satisfaction.

Conversely, "Preference for local wine," "Popular wines," and "Maximize profit" were deemed less important, reflecting variations in priorities based on country or restaurant style. "Relying on supplier recommendations," "Well-known brands," and "Not available in retail stores" scored low across all four countries. These differences highlight the varying stages of market maturity and strategic focus between Bosnia-Herzegovina and these more advanced wine markets.

Research in Croatia, which is geographically close and comparable, showed that restaurateurs prioritized "High reputation brand," "Tastes good," and "Preference for local wines" (Knežević, 2020). This suggests a similar market maturity and restaurateur mindset in Bosnia-Herzegovina.

Restaurateurs in Bosnia-Herzegovina, as well as those in the mentioned countries, share common views on the least important strategies for selecting wines for their lists. They generally prefer making their own choices rather than relying on supplier recommendations and do not prioritize selecting brands not available in retail stores. This preference is likely because the wine list serves as a personal tool for projecting the restaurant's image, food style, and personality (Corsey, 2006; Gil et al., 2008). Additionally, avoiding unfamiliar or eccentric choices helps mitigate perceived risks for consumers.

There is also consensus on the importance of selecting wines that taste good. This highlights the restaurateur's personal touch in defining the restaurant's identity, though interpretations of "taste good" can vary depending on the wine sophistication of individual restaurateurs and restaurants.

Localized and personalized preferences focused

The study by Sirieix and Remaud (2010) highlighted that French restaurateurs place a high preference on local wines. This preference not only differentiates their offerings by showcasing local wine quality but also promotes French culture and supports local winemakers. French restaurateurs also prioritize "Food and wine pairing" and ensure a "Competitive price fit within the food price range." These strategies indicate a focus on culturally crafted wine experiences, driven by restaurateurs'

personal preference and confidence in their gastronomic and business expertise, rather than external validation.

In contrast, restaurateurs in Croatia and Bosnia-Herzegovina, while also favoring local wines and personal taste, do not prioritize "Food and wine pairing" or "Competitive price fit within the food price range." This approach may reflect a lack of wine and gastronomic knowledge, as well as a lack of wine culture and ambition in these regions. Enhancing wine and food pairing knowledge could be beneficial. Wine and gastronomy are closely linked, and a fundamental understanding of both is crucial for creating value, boosting a restaurant's reputation, and increasing profits (Ivkov *et al.*, 2012).

High reputation brands

In Bosnia-Herzegovina and Croatia, "High reputation brand" emerged as the top criterion, a result that diverges from findings in other markets, except China, where it also ranked high. This is notable given that both Bosnia-Herzegovina and Croatia have rich wine traditions centered on local wines, whereas China's wine market is relatively new. The common factor appears to be a lack of wine knowledge and gastronomic confidence.

These findings suggest a strong focus on profitability in Bosnia-Herzegovina and Croatia, potentially at the expense of a broader gastronomic vision, relying heavily on external validation such as "trend," "status," "image," or "brand." In contrast, French restaurateurs, despite the long-standing wine tradition of France, prioritize local wines paired with foods over "Highly reputed brands," reflecting a deeper understanding of gastronomy and a focus on authenticity (Sirieix and Remaud, 2010).

This discrepancy indicates that Bosnian-Herzegovinian and Croatian restaurateurs may lack the gastronomic knowledge needed for creating authentic dining experiences, often relying on reputed brands as a fallback. This reliance may prioritize perceived profitability over genuine hospitality, potentially leading to a lesser customer experience and reduced long-term profitability. Recent studies emphasize the importance of context and food pairing in wine experiences, especially among younger consumers (Gino *et al.*, 2014; Livat *et al.*, 2024). These insights highlight the evolving landscape of wine preferences and underscore the need for businesses to adapt to modern consumer demands to enhance profitability.

Conclusions

The study reveals that Bosnian-Herzegovinian restaurateurs predominantly prioritize local wine preferences

and high-reputation brands in their wine selection strategies. This approach reflects a focus on familiarity and market security, which aligns with the limited wine knowledge and absence of sommeliers in casual dining establishments. While this strategy minimizes perceived risk, it also highlights potential missed opportunities to enhance gastronomic experiences and customer education. The findings underscore the importance of balancing local traditions with evolving consumer preferences, suggesting that improving wine list strategies could elevate dining experiences and profitability in the local restaurant industry.

The research has several limitations worth noting. Firstly, the sample size is relatively small and predominantly focused on Sarajevo. Additionally, restaurants were selected based on their willingness to participate, including a mix of casual and upscale dining establishments. A more targeted approach might have yielded more nuanced and detailed analyses.

Future research could benefit from expanding data collection to specific regions of Bosnia-Herzegovina to enhance the reliability and depth of the analyses. This approach could provide valuable insights into regional variations. Additionally, exploring how different types of restaurants, such as casual versus upscale, influence wine list preferences and rankings could further elucidate the dynamics of wine list design within Bosnia-Herzegovina's restaurant industry.

Author contributions

AČ conducted the survey, collected the data, and participated in the final version of the article. DN prepared the survey questionnaires, wrote the methodology, analyzed the data, and wrote the results and the draft version of the article. Both authors read and approved the final manuscript.

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Conflicts of Interest

The authors declare no conflict of interest.

References

Agnoli, L. and Outreville, J.F., 2023. The role of behavioural antecedents in driving wine consumption in Taiwan restaurants.

- Applied Economics. 56(34): 4086–4099. https://doi.org/10.1080/00036846.2023.2210815
- Amspacher, W., 2011. Wine price markup in California restaurants. Journal of Food Distribution Research. 42(1): 4–7. https://doi.org/10.22004/ag.econ.139071
- Aspler, T., 1991. The silent wine steward: A successful wine list ensures increased wine sales. Foodservice and Hospitality. 24: 42–43.
- Aune, L., 2002. The use of enchantment in wine and dining. International Journal of Contemporary Hospitality Management. 14(1): 34–37. https://doi.org/10.1108/09596110210415105
- Bailey, R.A., 2008. Design of comparative experiments. Cambridge: Cambridge University Press. pp. 177–182.
- Batt, P. and Dean, A., 2000. Factors influencing the consumer's decisions. Australian & New Zealand Wine Industry Journal. 15: 34–41.
- Ben Dewald, B.W.A., 2008. The role of the sommeliers and their influence on US restaurant wine sales. International Journal of Wine Business Research. 20(2): 111–123. https://doi.org/10.1108/17511060810883740
- Bowen, J.T. and Morris, A.J., 1995. Menu design: Can menu sell? International journal of contemporary hospitality management. 7(4): 4–9.
- Brown, D., 2003. The restaurant manager's handbook: How to set up, operate and manage a financially successful foodservice operation. Ocala: Atlanta Publishing.
- Bulic, I. 2021. How wine education can improve revenue in Dubrovnik restaurants? (Senior project, RIT Croatia).
- Burro, R., Branchini, E., Capitani, E., Barnaba, V., Fermani, A., Paradis, C., *et al.*, 2022. Is there an association between consumers' personality traits and the sensory characteristics they look for in wine? Food Quality and Preference. 105: 104767. https://doi.org/10.1016/j.foodqual.2022.104767
- Candiago, S., Tscholl, S., Bassani, L., Fraga, H. and Vigl, L.E., 2024.
 Quality wines in Italy and France: A dataset of protected designation of origin specifications. Data in Brief. 54: 110408. https://doi.org/10.1016/j.dib.2024.110408
- Cardebat, J.M. and Livat, F., 2016. Wine experts' rating: A matter of taste? International Journal of Wine Business Research. 28(1): 43–58. https://doi.org/10.1108/IJWBR-04-2015-0011
- Carlsen, J., 1998. Strategic issues in Australian wine tourism. In: Wine tourism—Perfect partners. Proceedings of the First Australian Wine Tourism Conference. Canberra: Bureau of Tourism Research. pp. 99–100.
- Cassar, M.L., Caruana, A. and Konietzny, J., 2020. Wine and satisfaction with fine dining restaurants: An analysis of tourist experiences from user generated content on TripAdvisor. Journal of Wine Research. 31 (2): 85–100. https://doi.org/10.1080/09571264. 2020.1764919
- Castro-Palafox, J., Macías-Gallardo, F. and Ozuna, C., 2023. The culture of wine in Mexican gastronomy: Historical background, current context, and perspectives for the future. International Journal of Gastronomy and Food Science. 35(7): 100848. https:// doi.org/10.1016/j.ijgfs.2023.100848
- Charters, S. and Pettigrew, S., 2005. Is wine consumption an aesthetic experience? Journal of Wine Research. 16(2): 121–136. https://doi.org/10.1080/09571260500327663

- Cohen, E., d'Hauteville, F. and Sirieix, L., 2009. A cross-cultural comparison of choice criteria for wine in restaurants. International Journal of Wine Business Research. 21(1): 17–19.
- Corsey, L., 2006. Restaurant wine list play more than a supporting role. Australian and New-Zealand Wine Industry Journal. 21(4): 62–64
- Croijmans, I., Hendrickx, I., Lefever, E., Majid, A. and Van Den Bosch, A., 2020. Uncovering the language of wine experts. Natural Language Engineering. 26(5): 511–530. https://doi.org/10.1017/S1351324919000500
- Cuozzo, S., 2015. Restaurants overprice wine because they know you have no idea. New York Post.
- Deng, D.S., Seo, S. and Harrington, R.J., 2023. Action and inaction regret in fine-dining decisions: The impact of the focal customer, sommelier and dining companion. International Journal of Contemporary Hospitality Management. 35(12): 4238–4258.
- Diez, J., 2007. El Brandy: Cuando el problema es el valor de la categoría. Investigación y Marketing. pp. 6–11.
- Dodd, T., 1997. Techniques to increase impulse wine purchases in a restaurant setting. Journal of Restaurant & Foodservice Marketing. 2: 63–73.
- Fele, G. and Giglioli, P.P., 2020. Performing taste: The sommelier ceremony. In: Space, taste and affect. Abingdon-on-Thames: Routledge. pp. 44–58. https://doi.org/10.4324/9781315307473-3
- Gagic, S. and Ivkov, M., 2013. Food and wine pairing—Six course menu example. Contemporary Trends in the Hospitality Industry. Belgrade, Serbia, 28th-29th November. pp. 451–462.
- Gergaud, O., Masset, P., Pedrinelli, A. and Weisskopf, J.P., 2024. To share or not to share: An analysis of wine list disclosure by Swiss restaurant owners. Journal of Wine Economics. 19(1): 4–18. https://doi.org/10.1017/jwe.2023.13
- Gil, I., Ruiz, M.E. and Berenguer, G., 2008. Qualitative and quantitative engineering criteria of restaurant wine lists.

 Journal of Wine Research. 19(1): 19–31. https://doi. org/10.1080/09571260802164012
- Gino, E., Ares, G., Issanchou, S., Laboissière, L.H.E. and Deliza, R., 2014. Identifying motives underlying wine purchase decisions: Results from an exploratory free listing task with Burgundy wine consumers. Food Research International. 62: 860–867. https:// doi.org/10.1016/j.foodres.2014.04.052
- Granucci, P., 1994. Effect of wine training on restaurant sales of wine. International Journal of Wine Marketing. 6: 11–19.
- Hall, J., Lockshin, L. and O'Mahony, B., 2001. Exploring the links between wine choice and dining occasions: Factors of influence. International Journal of Wine Marketing. 13(1): 36–53.
- Hill, R. and Fountain, J., 2022. Wines from the hinterland: Comparing availability of local wines on wine lists in two New Zealand tourism destinations. International Journal of Wine Business Research. 34(4): 567–589.
- Honoré-Chedozeau, C., Otheguy, M. and Valentin, D., 2024. Tell us how you taste wine, and we will tell you what kind of expert you are! Food Research International. 178: 113899. https://doi.org/10.1016/j.foodres.2023.113899
- Ivkov, M., Tešanović, D., Janićević, S. and Kalenjuk, B., 2012, November. The importance of food and wine pairing for raising the quality level of restaurant services. In 2nd International

- Professional Conference on "Trends and Challenges in Food Technology, Nutrition, Hospitality and Tourism.
- Knežević, P., 2020. Understanding restaurateurs' wine list design strategies in Croatian restaurants. Doctoral dissertation, RIT Croatia
- Kubát, P., Králiková, A. and Ryglová, K., 2024. Decomposition of the dimension of wine destination for the experiences of tourists: The concept of "winescape." In: Nature-based tourism and wellbeing: Impacts and future outlook. GB: CABI. pp. 243–252.
- Lacey, S., Bruwer, J. and Li, E., 2009. The role of perceived risk in wine purchase decisions in restaurants. International Journal of Wine Business Research. 21(2): 99–117. https://doi. org/10.1108/17511060910967962
- Livat, F., Marks, D. and Remaud, H., 2024. Wining and dining out:
 On understanding restaurant wine lists. Food, Culture & Society.
 1–20. https://doi.org/10.1080/15528014.2024.2322797
- Livat, F. and Remaud, H., 2018. Factors affecting wine price mark-up in restaurants. Journal of Wine Economics. 13(2): 144–159.
- Manske, M. and Cordua, G., 2005. Understanding the sommelier effect.

 International Journal of Contemporary Hospitality Management.

 17(7): 569–576. https://doi.org/10.1108/09596110510620645
- McMullan, K., Feng, C.M. and Chan, A., 2022. How do wine bloggers increase Twitter engagement? Through simple changes to their writing style. Journal of Wine Research. 33(2): 57–65. https://doi.org/10.1080/09571264.2022.2081141
- Mitchell, V.W. and Greatorex, M., 1989. Risk reducing strategies used in the purchase of wine in the UK. European Journal of Marketing. 23(9): 31–46.
- O'Neill, M., Palmer, A. and Charters, S., 2002. Wine production as a service experience-the effects of service quality on wine sales. The Journal of Service Marketing. 16(4): 342–362.
- Pearson, R.E., Bardsley, D.K. and Pütz, M., 2024. Regenerative tourism in Australian wine regions. Tourism Geographies. 1–23. https://doi.org/10.1080/14616688.2024.2328615
- Reynolds, D., 2024. Wine-menu design: An investigation using brain-computer interface technology. Journal of Foodservice Business Research. 27(1): 26–39. https://doi.org/10.1080/15378 020.2022.2063631
- Ritchie, C., 2007. Beyond drinking: The role of wine in the life of the UK consumer. International Journal of Consumer Studies. 31(5): 534–540. https://doi.org/10.1111/j.1470-6431.2007.00610.x
- Risius, A., Klann, B.O. and Meyerding, S.G., 2019. Choosing a lifestyle? Reflection of consumer extrinsic product preferences and views on important wine characteristics in Germany. Wine Economics and Policy. 8(2): 141–154. https://doi.org/10.1016/j. wep.2019.09.001
- Ruiz Vega, A., Olarte Pascual, C., Huarte Cristóbal, M., Muñoz Pino, R., Calderón Monge, M.E., Izquierdo Yusta, A., et al., 2004. Las denominaciones de origen vitivinícolas españolas. Distribución y Consume. 76: 45–51.
- Ruiz-Molina, M.E., Gil-Saura, I. and Berenguer-Contrí, G., 2010. Instruments for wine promotion in upscale restaurants. Journal of Foodservice Business Research. 13(2): 98–113. https://doi. org/10.1080/15378021003784483
- Scander, H., Neuman, N., Tellström, R. and Yngve, A., 2020. Acquiring competence: Sommeliers on 'good'food and beverage

- combinations. International Journal of Gastronomy and Food Science. 20: 100199. https://doi.org/10.1016/j.ijgfs.2020.100199
- Sirieix, L. and Remaud, H., 2010. Exploring wine list design strategy in French restaurants. Paper presented at the 5th International Academy of Wine Business Research Conference, Auckland: New Zealand.
- Sirieix, L., Remaud, H., Lockshin, L., Thach, L. and Lease, T., 2011.
 Determinants of restaurant's owners/managers selection of wines to be offered on the wine list. Journal of Retailing and Consumer Services. 18(6): 500–508. https://doi.org/10.1016/j.jretconser.2011.06.012
- Staub, C. and Siegrist, M., 2022. Rethinking the wine list: Restaurant customers' preference for listing wines according to wine style. International Journal of Wine Business Research. 34(3): 447–465. https://doi.org/10.1108/IJWBR-06-2021-0034
- Taylor, D.C., Russen, M., Dawson, M. and Reynolds, D., 2024.Defining and establishing a restaurant wine culture. International

- Journal of Contemporary Hospitality Management. 36(6): 1926–1943. https://doi.org/10.1108/IJCHM-09-2022-1097
- Vecchio, R., Annunziata, A. and Bouzdine-Chameeva, T., 2024.
 How to promote sustainable wine tourism: Insights from Italian and French young adults. Annals of Tourism Research Empirical Insights. 5(2): 100137. https://doi.org/10.1016/j.annale.2024.100137
- Walker, L., 1998. Making the wine list. Wines & Vines. 79(11): 86.
- Wansink, B., Cordua, G., Blair, E., Payne, C. and Geiger, S., 2006. Wine promotions in restaurants: Do beverage sales contribute or cannibalize? Cornell Hotel and Restaurant Administration Quarterly. 47(4): 327–336. https://doi.org/10.1177/00108804062946
- Yuksel, A. and Yuksel, F., 2003. Measurement of tourist satisfaction with restaurant services: A segment-based approach. Journal of Vacation Marketing. 9(1): 52–68. https://doi.org/10.1177/1356766702009001