

From tradition to moderation: Italian consumers' attitudes and price acceptance for dealcoholized wines

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ABSTRACT

This study examines Italian consumers' perceptions of dealcoholized wine and their conditional price acceptance under a hypothetical satisfactory-taste scenario. Using an online survey of 636 adults living in Italy, we combine descriptive statistics with an ordered logit model to investigate awareness, trial, perceived benefits and barriers, situational appropriateness, and relative price acceptance. Awareness is higher than familiarity, and 91.4% of respondents report never having tasted such a product. Within this comparatively educated and wine-involved sample, consumers associate dealcoholized wine with health, driving safety, and work-related compatibility, but also expect lower taste quality and weaker authenticity. In the ordered logit model, health orientation and perceived suitability for food pairing are positively associated with conditional price acceptance, whereas expecting a more diluted taste and viewing the product as "not real wine" are negatively associated. The evidence suggests that, after the recent Italian regulatory opening, the development of dealcoholized wine in Italy is likely to depend not only on improving sensory performance but also on establishing its symbolic legitimacy as a genuine form of wine and positioning it in contexts where its health and functional advantages are most valued.

1. Introduction

The wine industry is currently undergoing a significant transformation, shaped by evolving consumer preferences that increasingly prioritize health consciousness, moderation, and lifestyle compatibility (Ford et al., 2025). Within this broader shift, growing attention has been directed towards wines with reduced or no alcohol content, commonly discussed within the wider low- and no-alcohol (NOLO) market (Shaw et al., 2023). This trend reflects changing drinking habits and a rising demand for products that reconcile wine consumption with health-oriented, moderation-driven lifestyles. Italy provides a particularly relevant context for examining these developments. Wine in Italy is not only an economic product but also a deeply rooted cultural and social symbol, traditionally associated with authenticity, conviviality, and heritage (Piñeiro et al., 2022).

In this setting, the recent regulatory authorization for partial or total dealcoholizing marks an important development. A Ministerial Decree signed in December 2024 now permits the production and labelling of dealcoholized wines, aligning Italy with broader European Union regulations (WineNews.it, 2025). This change removes a major institutional constraint for domestic producers and opens new opportunities for

innovation in response to evolving consumer demand (Wongprawmas and Spadoni, 2018). These developments have contributed to growing academic and market interest in wines positioned within the broader NOLO space. In formal terms, no-alcohol wine contains $\leq 0.5\%$ v/v, while low-alcohol wine generally falls within the 0.5–8.5% v/v range, depending on varietal and national regulations (OIV, 2023; Okaru and Lachenmeier, 2022; Waehning and Wells, 2024). Within this broad landscape, dealcoholized wines represent a more specific segment: wines from which alcohol has been partially or completely removed through technological processes. While the broader NOLO literature offers useful conceptual and market background, the present study focuses empirically on dealcoholized wines.

The market prospects of dealcoholized wines depend not only on regulatory openness or technological feasibility, but also on consumer acceptance. Existing studies suggest that acceptance is shaped by a complex interplay of sensory expectations, perceived authenticity, health motivations, social norms, and consumption contexts (Bruwer et al., 2011; Shaw et al., 2023). On the one hand, wines with reduced alcohol content may appeal to consumers seeking moderation, lower calorie intake, or products compatible with particular dietary, religious, social, or professional constraints (Kumar et al., 2024; Sam et al., 2021).

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On the other hand, consumer skepticism remains substantial. Removing alcohol may be perceived as compromising the sensory characteristics of wine (Stasi et al., 2014), while the technological intervention itself may be viewed as a departure from the traditions and meanings associated with wine authenticity (Masson and Aurier, 2017). These tensions are especially relevant in a traditional wine-producing and wine-consuming country such as Italy, where the cultural legitimacy of innovative wine products may be tested more strongly than in less tradition-bound contexts. At the same time, the literature specifically addressing dealcoholized wines remains relatively limited, and much of the broader discussion is still framed around NOLO beverages or reduced-alcohol categories more generally. This creates a need for more focused evidence on how consumers perceive and evaluate dealcoholized wines as a distinct product segment. Against this background, this study uses four dimensions - health motives, sensory expectations, authenticity, and situational/social norms - as a conceptual organizing framework for selecting survey items and interpreting consumer responses. These dimensions are not treated as psychometrically validated latent constructs, but as theory-informed categories that help structure the analysis of attitudes toward dealcoholized wine. Building on this framework, the study addresses three research questions:

- RQ1. How aware and familiar are Italian consumers with dealcoholized wines, and how do they position this category in terms of healthfulness, sensory quality, and authenticity?
- RQ2. In which situational and social contexts are dealcoholized wines perceived as appropriate or inappropriate, and what are the main perceived benefits and barriers to their use?
- RQ3. In a hypothetical satisfactory-taste scenario, which demographic, motivational, and symbolic factors are associated with consumers' conditional acceptance of relative price for dealcoholized wines compared with conventional wine?

To answer these questions, we analyze a structured online survey of 636 adults residing in Italy. We use descriptive statistics to map awareness, perceptions, motivations, perceived barriers, and preferred presentation formats, and an ordered logit model to examine the determinants of conditional price acceptance under an explicit assumption of satisfactory taste. In doing so, the paper contributes to the literature by providing evidence on a product segment that is often discussed within the broader NOLO context but has distinct technological, symbolic, and market features. It also offers practical insights for producers, marketers, and policymakers operating in a traditional wine market now entering a new regulatory phase.

2. Literature review

Research on low- and no-alcohol beverages provides an important backdrop for understanding consumer responses to dealcoholized wines, especially where dedicated evidence remains limited. Much of the recent literature has examined the expansion of the broader NOLO market, highlighting the role of health consciousness, moderation-oriented lifestyles, and changing drinking norms (Wachning and Wells, 2024).

A first strand of literature concerns the social and demographic drivers of reduced-alcohol consumption. Studies indicate that younger cohorts, particularly Millennials and Generation Z, are leading changes in drinking practices, motivated by health concerns and evolving social norms (Rai et al., 2025). The "sober curious" movement has further supported the visibility and legitimacy of NOLO beverages by promoting more mindful drinking practices (Shaw et al., 2023; Siconolfi et al., 2024). These developments suggest a more favorable environment for products such as dealcoholized wines, although wine remains a special case because of its strong sensory and symbolic associations. Direct evidence on dealcoholized wines confirms the presence of product-specific barriers (Stasi et al., 2014). Stasi et al. (2014) in a choice-modelling study of Italian consumers' preferences for dealcoholized wines, found

that dealcoholizing is generally perceived as a negative attribute, particularly when alcohol content drops below 10%. However, this negative effect can be moderated by price and information: a discount proportional to the reduction in alcohol content can partially offset reluctance, and greater information provision may reduce consumer resistance. The same study also found that dealcoholized wine tends to appeal more to younger, infrequent consumers, as well as to those who pay closer attention to labels or face alcohol-related health constraints. This evidence is especially relevant in the Italian context, but it also points to the need for updated analysis in light of more recent market developments and regulatory change. Although Stasi et al. (2014) remains a useful early reference point, its findings do not map straightforwardly onto the present Italian landscape, given the subsequent evolution of consumer attitudes, the broader growth of the NOLO segment, and the recent Italian regulatory opening for dealcoholized wine.

Sensory quality remains one of the most important determinants of consumer acceptance. Research suggests that dealcoholizing processes can affect the organoleptic properties of wine, thereby reinforcing perceptions of lower quality (Akhtar et al., 2025; Stasi et al., 2014). At the same time, improvements in dealcoholizing technologies, including spinning cone columns and reverse osmosis, have enhanced the sensory profiles of these products and may reduce some of the quality concerns historically associated with them (Kumar et al., 2024; Sam et al., 2021).

Authenticity represents a second major dimension. In countries where wine is deeply embedded in cultural and social practices, products that diverge from traditional wine characteristics may encounter resistance (Pineiro et al., 2022). Masson and Aurier (2017) show that consumers often associate authenticity with conventional production methods and familiar sensory profiles, which can make innovative wine products appear less legitimate. For dealcoholized wines, this issue is particularly salient because the removal of alcohol may be interpreted as altering a defining feature of wine itself. This helps explain why effective communication strategies are likely to be important in supporting acceptance, especially when they can reinforce perceptions of legitimacy and quality (Mingione et al., 2020).

A third strand of literature focuses on health motivations and the role of labelling. Health-conscious consumers are more likely to consider lower-alcohol wines compatible with a balanced lifestyle (Shaw et al., 2023). Similarly, Deroover et al. (2021) found that consumers often perceive low-alcohol wines as healthier alternatives, even if their knowledge of the health implications of alcohol remains incomplete. Nutritional information may strengthen this appeal: Bazzani et al. (2025) report that calorie labelling can positively influence purchasing decisions, while Okaru and Lachenmeier (2022) emphasize the importance of labelling in shaping perceptions and behaviours in the NOLO category. At the same time, the effects of labelling are not unequivocally positive. Annunziata et al. (2016) found that minimalist, neutrally framed labels referring to immediate health risks can resonate with consumers, especially younger ones. By contrast, Popovich and Velikova (2023) found that consumers who pay greater attention to nutritional and label information may perceive wine as less healthy than consumers who do not focus as strongly on such information. Annunziata et al. (2019) further show that the framing, design, and visibility of warnings influence young consumers' choices for wine and beer, with front-label logos proving particularly effective. Taken together, these studies suggest that health-related information does not operate in a single direction. It can enhance acceptance when it highlights moderation, control, or functional benefits, but it can also reduce acceptance when it activates concerns about lower quality, artificiality, or symbolic distance from conventional wine. This tension helps justify why the present study considers health motives alongside sensory and authenticity-related beliefs rather than treating health communication as uniformly beneficial.

A fourth stream of research highlights the importance of social norms, situational appropriateness, and consumer heterogeneity.

Bruwer et al. (2011) show that wine consumption is strongly shaped by social settings, peer influence, and cultural expectations. In this respect, products with reduced alcohol content may be viewed as more appropriate in functional or responsibility-related contexts, such as professional settings or situations involving driving or health concerns, while being seen as less appropriate in traditional or celebratory wine occasions. Economic considerations intersect with these symbolic and situational dimensions. Stasi et al. (2014) found that consumers are willing to purchase dealcoholized wine mainly at a discount proportional to the reduction in alcohol content, indicating that perceived value and price fairness are central to the adoption process.

Taken together, the literature suggests that acceptance of dealcoholized wine is governed less by a single favourable or unfavourable attitude than by a trade-off across four recurring dimensions: health and functional utility, expected sensory performance, authenticity, and situational/social fit. This perspective also helps reconcile apparently contradictory findings on labelling and health communication. Information that increases interest by signalling moderation or control may simultaneously reduce acceptance if it cues inferior taste, technological manipulation, or symbolic distance from conventional wine. The present study therefore selects variables that capture these four tensions rather than assuming that health-oriented communication has a uniformly positive effect.

3. Methodology

Understanding consumer perceptions and behaviors towards dealcoholized wines requires a methodological design capable of capturing both broad consumption patterns and more specific beliefs, motivations, and contextual factors (Ruggeri et al., 2024). To examine consumer perceptions of dealcoholized wine, we implemented a structured cross-sectional online questionnaire administered to adult residents in Italy in April 2025. The instrument covered socio-demographic characteristics, beverage consumption habits, awareness and experience with dealcoholized wine, motivations and barriers, situational appropriateness, communication and packaging preferences, and conditional price acceptance. The following subsections describe the sampling strategy, survey design, analytical approach, and ethical safeguards.

3.1. Participant recruitment and sampling

Respondents were recruited through a controlled snowball strategy (Goodman, 1961), in which an initial diverse pool of participants - balanced as far as possible across age, gender, and macro-area - received the link and could forward it within capped referral chains. This approach helped reach heterogeneous respondents under limited resources, but it does not eliminate homophily, network clustering, or self-selection bias. The sample should therefore be read as an analytically useful but non-probabilistic segment of Italian consumers (Szolnoki and Hoffmann, 2013), not as a statistically representative portrait of the Italian adult population.

3.2. Survey development and structure

The survey instrument consisted of 83 questions organized into six thematic sections. Its content was informed by the constructs highlighted in the literature review – health-related motives, sensory expectations, authenticity, and situational/social aspects – as well as prior work on wine consumer behavior and emerging categories such as low- and no-alcohol wines (Bruwer et al., 2011; Lockshin and Corsi, 2012; Masson and Aurier, 2017; Shaw et al., 2023). Most questions were closed-ended and included single-choice, multiple-choice, and 5-point rating-scale formats. These were complemented by two optional open-ended prompts, one following the item on prior tasting experience and one at the end of the motivations/barriers section, as well as several “other, please specify” response options. The questionnaire was piloted

with a small convenience sample following standard methodological guidance (Converse and Presser, 1986); feedback led to minor revisions in wording and ordering and the removal of redundant items before full deployment. At the beginning of Section 3, respondents were provided with an explicit definition of the focal product. Dealcoholized wine was described as a wine from which alcohol had been partially or totally removed through technological processes. Table 1 summarizes the structure and main content of the six sections. The questionnaire was administered in a fixed section order and question sequence; no randomization of blocks or items was applied. No monetary incentive was offered; participation was entirely voluntary.

In the empirical analysis, Sections 1–5 are primarily used to describe the sample and to construct explanatory variables capturing health orientation, sensory and authenticity beliefs, and situational attitudes. Section 3 provides the ordinal measure of conditional relative price acceptance that serves as the dependent variable in the ordered logit model (Section 3.3). Open-ended answers across sections were used qualitatively to contextualize and interpret quantitative findings, but were not subjected to formal content analysis.

Survey administration indicators suggest that data quality was satisfactory overall. The average completion time was approximately 13 minutes and 50 seconds, consistent with that of questionnaires of this length and structure. The overall break-off rate was 13.9%, indicating a moderate but acceptable level of respondent retention across sections. In addition, response-time screening and routine data-cleaning procedures identified a limited number of problematic cases. After excluding 21 questionnaires due to implausibly short response times and incomplete completion patterns, the final analytical sample comprised 636 completed responses.

3.3. Statistical analysis

The analysis proceeded in two stages. First, we computed descriptive statistics (frequencies, percentages, means, and standard deviations) to characterise the sample, describe beverage consumption patterns, and summarise awareness, perceptions, motivations, and barriers related to dealcoholized wines (Sections 4.1–4.3). These results provide the empirical basis for addressing RQ1 and RQ2. To address RQ3, we estimated an ordered logistic regression for conditional price acceptance. The dependent variable is the nine-category payment-ladder response to a hypothetical dealcoholized wine that satisfies the respondent in terms of taste relative to the respondent's usual wine. We therefore interpret the outcome as conditional stated-price acceptance in a hypothetical scenario, not as realized willingness to pay. Explanatory variables were selected as item-level indicators of the four conceptual dimensions discussed above. Because these indicators are not validated scales and some are likely correlated, the model is exploratory and coefficients are interpreted as associations rather than causal effects.

The model was estimated using ordered logistic regression in Stata 19 (StataCorp., 2025). Goodness-of-fit was evaluated using McFadden's pseudo- R^2 , McKelvey & Zavoina's R^2 , and the proportion of correctly classified observations, as well as Pearson and deviance statistics (Long and Freese, 2014). To assess potential multicollinearity, we estimated an auxiliary OLS model including the same set of predictors used in the ordered logit specification and computed variance inflation factors (VIFs). The diagnostic results did not indicate problematic multicollinearity, as all VIF values were below the conventional threshold of 5, with a mean VIF of 1.86. The full VIFs are reported in Table S5 in the supplementary material. The proportional-odds (parallel-lines) assumption was assessed using standard diagnostic tests and was not rejected ($p > 0.10$), supporting the use of a single-equation ordered logit specification rather than alternative multinomial models (Brant, 1990). Because the dependent variable is based on a hypothetical payment ladder without incentive-compatible mechanisms, the estimated coefficients are interpreted as describing patterns in stated relative price acceptance rather than actual market behavior. Statistical significance was set at the conventional 5%

Table 1
Structure of the questionnaire.

Section	Main content	Example measures	Key references informing design
1. Socio-demographic and socio-economic profile	Basic characteristics and context for interpreting responses.	Age, gender, education level, employment status, household income, household composition, region of residence, professional experience in the wine sector, self-reported wine involvement.	Stasi et al. (2014) ; Waehning and Wells (2024)
2. Beverage consumption patterns and wine choice criteria	Overall beverage repertoire and wine-related decision criteria.	Frequency of consumption of red, white and sparkling wine, beer, spirits, cocktails, soft drinks, iced teas across ordered categories (from “never” to “daily”); typical consumption contexts (aperitifs, home dining, restaurant dining, social gatherings, professional events, solitary occasions); 1–5 importance ratings for intrinsic and extrinsic wine attributes (sensory characteristics, price, alcohol content, brand reputation, geographical origin).	Charters and Pettigrew (2007) ; Vidal et al. (2004) ; Bruwer et al. (2011) ; Lockshin and Corsi (2012)
3. Awareness, familiarity and initial perceptions of dealcoholized wine	Knowledge and first-order beliefs about dealcoholized wines.	Awareness and familiarity questions; prior tasting experience; expectations regarding sensory and symbolic properties for non-tasters (e.g. “more diluted”, “less structured”, “similar to a soft drink”, “not ‘real’ wine”, “no clear expectation”).	Masson and Aurier (2017) ; Shaw et al. (2023)
4. Motivations, perceived barriers and situational appropriateness	Drivers and obstacles to dealcoholized adoption and context-specific likelihood of use.	Importance of potential benefits (e.g. reduced health impact, better sleep, ability to drive) and obstacles (e.g. expected poor taste, lack of information, social stigma) measured on Likert scales; semantic-differential items on innovativeness, healthfulness, sensory quality and authenticity; situational likelihood of choosing a dealcoholized wine across established drinking contexts (e.g. meals, social gatherings, professional events).	Bruwer et al. (2011) ; Masson and Aurier (2017) ; Shaw et al. (2023) ; Mora et al. (2021) ; Souza-Coutinho et al. (2020)
5. Labelling, packaging, retail placement and ethical concerns	Presentation and commercial integration of dealcoholized wines.	Preferences for communicating alcohol content (qualitative vs quantitative information), desired label information, preferred packaging formats (e.g. 0.75 L glass bottles vs alternative formats), preferred store placement (dedicated dealcoholized section vs integration in wine aisle vs placement with soft drinks), attitudes towards selling dealcoholized wines to minors and perceived regulatory/ethical issues.	Annunziata et al. (2016) ; Masson and Aurier (2017) ; Bazzani et al. (2025)
6. Conditional price acceptance and substitution intentions	Economic valuation and potential substitution of conventional wine.	Relative conditional price acceptance for a dealcoholized wine that matches the taste and quality of respondents’ usual wine, elicited via a linear payment ladder from –40% to +40%; intended frequency of choosing such a dealcoholized wine instead of the usual wine in the future under acceptable quality; open-ended comments on barriers and facilitators.	Liebe et al. (2011) ; Vecchio et al. (2022)

threshold.

3.4. Ethical considerations

Throughout the research process, we adhered strictly to ethical standards for survey research involving human subjects. At the start of the survey, each participant was presented with an informed consent statement explaining the study’s purpose, the voluntary nature of participation, and the measures taken to protect their data. Only those who explicitly consented (by clicking agreement) could proceed to the questions, ensuring active informed consent in line with European research ethics protocols ([Dove, 2018](#)). Participants were assured anonymity; no identifying personal data (such as names or contact information) was collected in the questionnaire. All responses were recorded and stored in aggregate form, and results are reported only in summary, preventing any individual from being identified. These practices comply with the EU’s General Data Protection Regulation (GDPR), which governs data privacy and requires that survey respondents’ personal data be protected and used only with consent for specified research purposes. We also followed guidelines on minimizing data collection – gathering only information relevant to our research questions – to respect respondents’ privacy. Furthermore, as an added safeguard, the online survey platform was configured not to record IP addresses or geo-location details, thereby enhancing anonymity.

4. Results and discussion

4.1. Sample characteristics and general consumption patterns

The final sample consists of 636 respondents ([Table 2](#)). The age distribution indicates broad representation across adult age cohorts, with the largest groups being those aged 55–64 years (30%), 25–34 years (20%), and 35–44 and 45–55 years (14%). Women are slightly over-represented, comprising 56% of participants, while men account for 44%.

Relative to national benchmarks, the sample appears more concentrated among respondents with higher educational attainment and comparatively higher household income. A significant proportion (37%) reported ‘Postgraduate specialization/PhD’ as their highest qualification. This figure may reflect a nuance of the Italian academic system, where one-year specialized courses undertaken after a bachelor’s degree are a common form of postgraduate training and are often self-reported in this category. When combined with those holding a master’s degree (30%) or a bachelor’s degree (11%), the sample clearly represents a highly educated consumer segment. While this provides valuable insights from a highly engaged and educated consumer segment, the findings should be interpreted with this specific demographic context in mind. According to [ISTAT \(2025a\)](#), in 2024, 22.3% of Italians aged 25–64 held a tertiary qualification, while 44.4% had upper-secondary education. In the present sample, respondents with higher educational credentials are more prevalent, whereas upper-secondary profiles are less represented. Income also appears shifted upward: among respondents disclosing household income, the sample median falls in the

Table 2

Socio-demographic characteristics of the survey sample (n = 636).

	Frequency	Percentage
Age group		
18–24 years	58	9%
25–34 years	126	20%
35–44 years	88	14%
45–55 years	91	14%
55–64 years	192	30%
65 years and over	82	13%
Gender		
Female	357	56%
Male	280	44%
Education		
Lower secondary school (middle school)	9	1%
High school diploma	134	21%
Bachelor's degree (3-year program)	68	11%
Master's degree (5-year program)	188	30%
Postgraduate specialization/PhD	238	37%
Living arrangement		
Other	45	7%
With friends/roommates	22	3%
With parents/relatives	74	12%
With a partner and children	418	66%
Alone	78	12%
Income group		
20,000 € to 35,000	127	20%
35,000 € to 50,000	94	15%
50,000 € to 70,000	105	16%
< 20,000	48	8%
> 70,000	180	28%
Prefer not to answer	83	13%
Wine industry experience (yes)	67	11%
Teetotal (yes)	61	10%

€50,000–€70,000 bracket, while ISTAT (2025b) reports a median annual household income of €30,039 for resident households in 2023. These features should be borne in mind when interpreting the descriptive results and the regression estimates. Moreover, the results may be especially informative for a relatively educated and economically secure segment of Italian consumers, which may be somewhat more familiar with emerging dealcoholized categories and more at ease with hypothetical valuation exercises. An initial overview of beverage consumption frequency provides a clear picture of drinking habits, as shown in Table S1 in the supplementary material. Overall, 62.3% of respondents reported consuming at least one type of alcoholic beverage every week, while only 5.0% reported drinking alcohol on a daily basis. These figures suggest a prevailing tendency toward moderate, non-habitual alcohol use in the sample, consistent with a broader cultural norm of controlled and context-dependent drinking. This moderation is also reflected in typical serving sizes among wine drinkers: nearly three-quarters of respondents (72.6%) reported drinking 1–2 glasses of wine per occasion, with only 13.2% consuming 3–4 glasses and just 1.4% consuming more than 4 glasses. Another 12.9% indicated that their intake “varies greatly depending on the occasion,” suggesting context-sensitive behavior rather than habitual high-volume consumption. These results are consistent with a Mediterranean drinking model characterized by frequent but predominantly moderate consumption, embedded in meals and social contexts rather than habitual heavy drinking.

Among the 576 non-teetotal respondents, wine remains central to the beverage repertoire. Red wine is the most frequently consumed category, with 52.9% reporting consumption at least weekly, followed by white wine (43.9%) and beer (44.7%). Sparkling wine, by contrast, is consumed mainly on special occasions (48.4%), while spirits and cocktails are more clearly occasional beverages. Occasion-specific responses (presented in Figure S1 in the supplementary material) reinforce this segmentation: still wines are anchored to meals and restaurant consumption, sparkling wine to celebrations, and beer or cocktails to aperitifs and informal social settings. This differentiated beverage landscape matters for dealcoholized wine because market entry does not

occur in a neutral context: consumers already assign distinct beverages to distinct occasions, so acceptance depends on whether dealcoholized wine can fit existing consumption scripts or create a credible new one. By focusing on functional contexts where moderation is a distinct asset, such as professional events or weekday lunches, dealcoholized wines can fill situational gaps. In these moments, they are not positioned as an inferior substitute for traditional wine, but rather as the most appropriate solution for a modern consumption need. Ultimately, market acceptance will depend less on replacing traditional wine in its most entrenched hedonic rituals and more on becoming the optimal choice for specific, well-defined occasions.

To better understand the evaluative criteria underlying consumer wine selection, participants who drink wine (n=576) rated the importance of intrinsic and extrinsic attributes on a 5-point importance scale (Fig. 1).

The results show that intrinsic sensory qualities—overall balance, structure, persistence, and smoothness—are paramount, while key extrinsic cues such as geographical origin, price, and producer reputation also play a central role. This suggests that for this segment, wine quality is primarily defined by sensory experience and authenticity cues, with price functioning as a quality signal rather than merely a cost consideration, in line with previous research identifying these as key satisfaction drivers (Charters and Pettigrew, 2007; Vidal et al., 2004). Extrinsic cues, notably geographical origin, price, and producer reputation, also significantly influence consumer choices. While not the single most dominant factor, the importance ratings for price indicate it is a decisive part of the consumer's value equation, used to assess whether the wine's sensory promise is justified by its cost. Attributes such as fruitiness and freshness elicited more varied responses, reflecting diverse taste preferences, while tannicity and alcohol content were considered the least important, consistent with market trends toward smoother wine styles (Mora et al., 2021; Souza-Coutinho et al., 2020). For dealcoholized wines, a crucial challenge is thus achieving sensory parity in core experiential attributes while strategically leveraging extrinsic factors, particularly provenance and pricing, to build legitimacy and consumer trust.

4.2. Consumer perceptions, motivations, and barriers regarding dealcoholized wines

Table 3 summarizes respondents' familiarity with dealcoholized wines. Awareness of the category clearly exceeds familiarity and direct trial. While 55.9% of respondents report having heard of low- or no-alcohol wines and a further 6.5% say they know them quite well, 76.1% rate their knowledge of the characteristics and production methods of dealcoholized wine as the lowest. Trial is rarer still: 91.1% have never tasted or purchased it. In this sample, dealcoholized wine is therefore known more as an idea than as a familiar object of consumption. This is substantively important for our results: many respondents can express attitudes toward the category, but those attitudes are often formed without direct sensory experience. Overall, the category remains nascent in this sample, characterized by low familiarity, minimal trial, and pronounced skepticism regarding quality.

Expectations are correspondingly cautious. Before any direct experience, 65.2% expect dealcoholized wine to be of lower quality than traditional wine, whereas only 7.9% expect higher quality. These expectations of diminished quality may present a significant barrier to adoption, reinforcing findings from previous studies, which highlight quality perceptions as a key determinant of conditional price acceptance and adoption (Masson and Aurier, 2017; Shaw et al., 2023). Among the 55 respondents who had already tried it, evaluations remain lukewarm rather than enthusiastic: 50.9% describe the overall experience as neutral, 32.7% as negative, and only 16.3% as positive. Likewise, 67.3% of tasters rate dealcoholized wine as lower in quality than traditional wine. Direct experience, therefore, only marginally softens skepticism and does not overturn it.

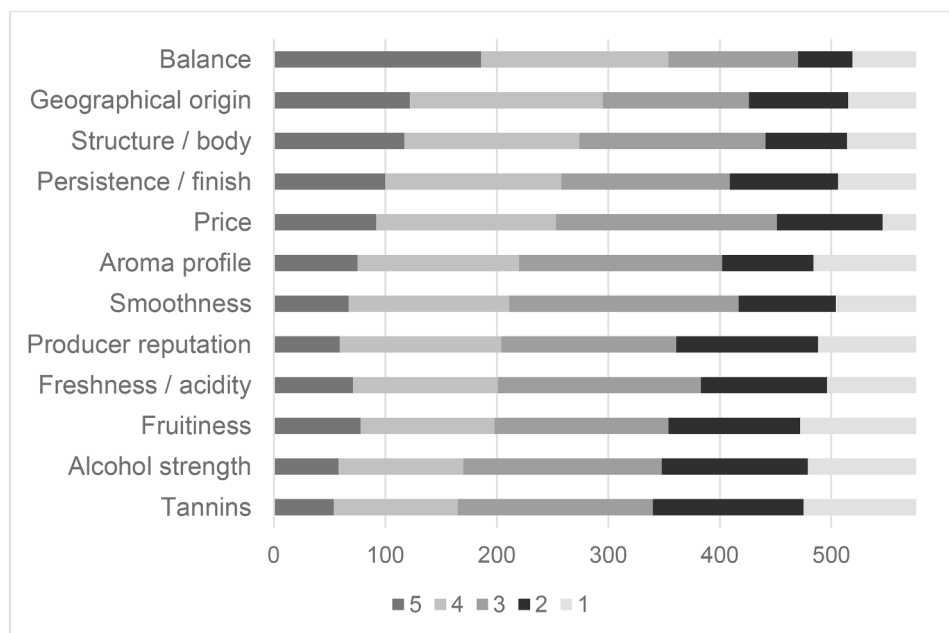


Fig. 1. Importance ratings of intrinsic and extrinsic wine attributes in purchase decisions among wine drinkers (N=576) (Likert scale from 1 (“not important at all”) to 5 (“very important”).

Table 3

Awareness, familiarity, trial experience, and perceived quality of dealcoholized wines among Italian consumers (% of total sample, n=636).

Question	Response category	Frequency	Percentage
Had you ever heard of dealcoholized wines before today?	No, I had never heard of them	239	37.6
	Yes, I know them quite well	41	6.5
	Yes, I have heard of them, but I do not know them in detail	356	55.9
How knowledgeable do you consider yourself about the characteristics and production methods of dealcoholized wines?	1 = Not informed at all	484	76.1
	2 = Slightly informed	118	18.6
	3 = Moderately informed	17	2.7
	4 = Very informed	15	2.4
	5 = Extremely informed	2	0.3
Have you ever tasted or purchased dealcoholized wine?	No, never	581	91.1
	Yes, I tried it once or twice	53	8.3
	Yes, several times	0	0
	Yes, I drink it regularly	2	0.3
If you have tried a dealcoholized wine, how would you rate your overall experience? (N=55)	1 = Very negative	6	10.9
	2 = Rather negative	12	21.8
	3 = Neutral	28	50.9
	4 = Rather positive	7	12.7
	5 = Very positive	2	3.6
How do you expect dealcoholized wines to compare with traditional wines in terms of quality?	1 = Much lower	124	19.5
	2 = Somewhat lower	291	45.7
	3 = Similar (neither lower nor higher)	172	27.0
	4 = Somewhat higher	36	5.7
	5 = Much higher	14	2.2

To explore more systematically how consumers conceptualize dealcoholized wine, respondents were first presented with six general descriptors—innovative, light/drinkable, less tasty, healthier, less authentic, and a good alternative to traditional wine—rated on a 5-point Likert scale as reported in Table 3. Respondents who had never tasted a

dealcoholized wine were then asked about their specific expectations regarding their taste compared to its traditional counterpart (Table S2 and Table S3 in the supplementary material).

Functional and positive associations are present: around two fifths of respondents describe dealcoholized wine as innovative/modern or light/easy-drinking, and 52.3% rate it as healthier (scores 4–5). Yet these associations are counterbalanced by symbolic distance from conventional wine. 38.5% rate it as less authentic, and only 20.7% see it as a good alternative to traditional wine, while more than half reject that description (scores 1–2). Among non-tasters, the anticipated sensory profile is also cautious: 38.4% expect a lighter, less structured product and 17.0% a more watery/bland one, whereas only 11.6% expect something roughly comparable to traditional wine. Another 33.0% report no clear expectation. Taken together, these results suggest that the category suffers less from lack of awareness per se than from weak sensory confidence and uncertain legitimacy, consistent with prior work on authenticity and quality concerns in innovative wine categories (Masson and Aurier, 2017; Stasi et al., 2014). Importantly, they suggest that the perceived authenticity deficit may not be a purely philosophical concern: many consumers fear that the dealcoholizing process will strip wine of its essential sensory attributes—body, complexity, and structure—making it feel both less authentic and less enjoyable.

Perceived benefits are primarily functional, as presented in Fig. 2 and Figure S2 in the supplementary material. The most frequently selected advantages are lower impact on health (73.7%), the ability to drink without worrying about driving (58.3%), and greater social inclusion for people who do not drink alcohol (49.1%). The rated motivations show the same hierarchy: safe driving, health and well-being, and medical reasons are the strongest motives. By contrast, hedonic and experiential motives such as novelty, experimentation, or curiosity play a much subtler role, and motivations that are not anchored in a clear functional purpose receive relatively low importance ratings.

As shown in Figs. 3 and Figure S3 in the supplementary material, barriers, by contrast, are dominated by anticipated sensory and symbolic loss. The most frequently selected concerns are lower taste/quality (54.2%), reduced pleasure (40.2%), and the idea that dealcoholized wine is not “real wine” (31.9%). In the rated obstacle items, preference for traditional wine (58.9% scoring 4–5) and lower perceived quality (48.8%) clearly outweigh social stigma (22.4%), while lack of

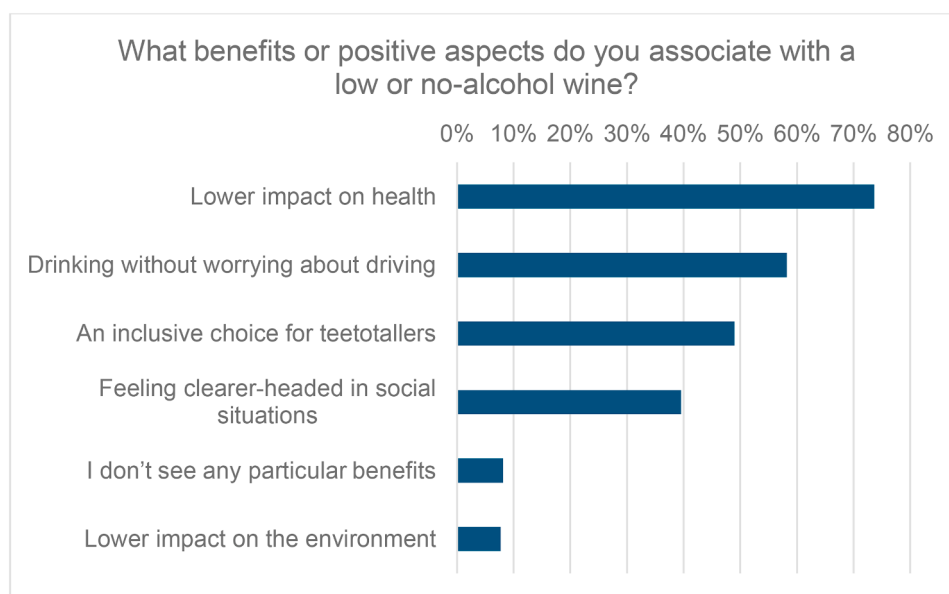


Fig. 2. Perceived benefits of choosing dealcoholized wines (number of respondents, $n = 636$).

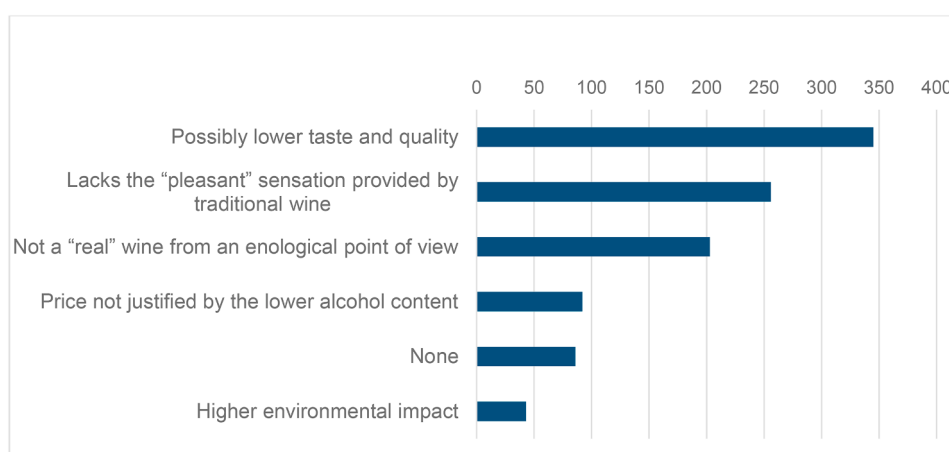


Fig. 3. Key consumer concerns about dealcoholized wines ($n = 636$).

information (45.1%) and limited availability (36.3%) occupy an intermediate position. This pattern closely matches the trade-off suggested in the literature: health and functional utility generate interest, but acceptance remains constrained when the same product is expected to underperform on taste or to violate category norms (Shaw et al., 2023; Masson and Aurier, 2017).

4.3. Market integration: situational, social, and commercial context

Beyond individual perceptions and motivations, the commercial viability of dealcoholized wines depends on where and how they fit into existing drinking occasions and retail environments. To explore this, the survey assessed the situational likelihood of choosing a dealcoholized wine across a range of occasions and examined perceptions of social comfort, labelling, packaging, and store placement (see Fig. 4).

Respondents are most open to dealcoholized wine in responsibility-laden contexts: about 44% report a high likelihood of choosing it in professional settings such as business lunches, and about 42% do so for quick lunches or work-related meals. Support falls to around 30% for a main meal at home and to roughly a quarter for restaurant meals with friends, aperitifs, or special occasions. The basic direction of this result is

consistent with prior NOLO research (Shaw et al., 2023), but the Italian evidence remains substantively important because it shows how sharply this divide persists in a traditional wine culture immediately after the regulatory opening of the category. Early adoption is therefore more likely to occur in contexts where sobriety has an obvious use value than in celebratory settings where conventional wine still carries stronger symbolic weight.

Social context matters, but it is not uniformly prohibitive. Around 44.6% of respondents agree that social context or company influences the choice of a dealcoholized wine, and 51.0% say they would feel moderately or very comfortable ordering one in a venue where friends are drinking traditional wine. At the same time, about 26% remain uncomfortable. Social friction is therefore present, but it is weaker than the sensory and authenticity barriers discussed above.

Commercial presentation points in the same direction (see Table S4 in the supplementary material). Most respondents want explicit information on alcohol content: 46.3% prefer both numerical and qualitative wording and 41.6% prefer numerical information alone. Packaging preferences are even clearer, with 72.4% favouring the traditional 0.75 L glass bottle. Store placement is more divided, but respondents prefer either a dedicated low-alcohol section (36.1%) or the wine aisle (31.4%)

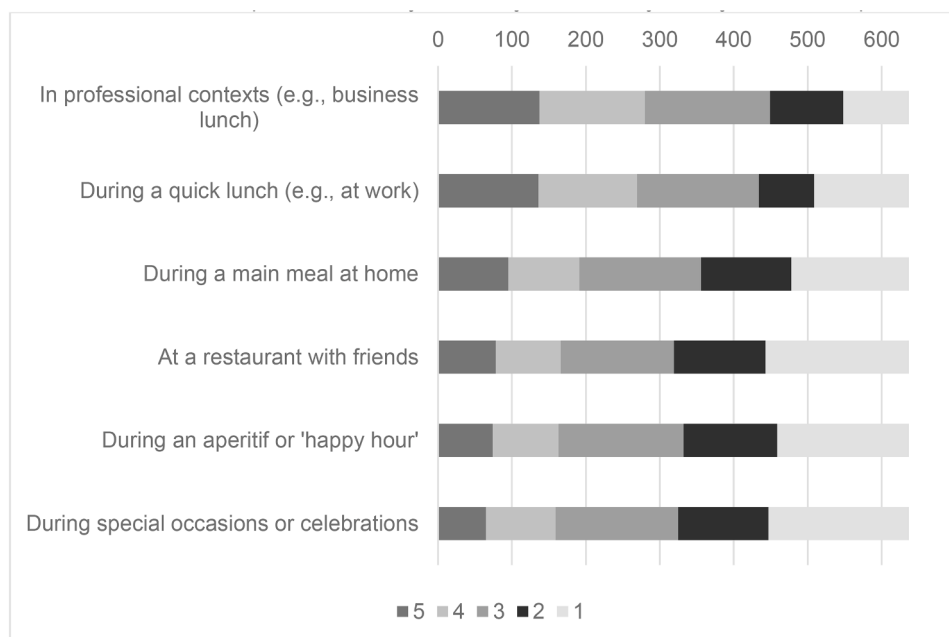


Fig. 4. Likelihood of choosing a dealcoholized wine across common drinking occasions (scale 1 “very unlikely” – 5 “very likely”, $n = 636$).

over placement with soft drinks or in health-food sections. Consumers thus seem willing to recognise dealcoholized wine as a distinct product, but not as a non-wine beverage. This does not demonstrate that any specific framing strategy will work; rather, it identifies the cues that consumers currently associate with legitimacy and continuity, which future experimental research should test more directly.

Finally, the survey probed attitudes towards minors' access to dealcoholized wines. The results reveal a striking contradiction. While a majority (61.4%) believe minors should be allowed to purchase dealcoholized wines—emphasizing their non-intoxicating nature and potential role in social inclusion—a nearly identical majority (63%) expresses moderate-to-high concern that this could encourage curiosity about alcoholic wine and act as a gateway. This tension between the product's functional safety and its symbolic status as “wine” underscores the need for cautious, responsible marketing strategies and clear communication to prevent the unintended normalization of wine culture among minors.

4.4. Determinants of consumer price acceptance for dealcoholized wines

Respondents were asked how much they would pay for a hypothetical dealcoholized wine that matches the taste and quality of their usual wine. Even under this favourable assumption, responses remain cautious: 48.8% accept price parity, 45.4% require a discount of at least 10%, and only 5.8% accept a premium. Since 91.1% of the sample had never tasted dealcoholized wine, many respondents are effectively pricing an idealised product rather than the current market offer. The model should therefore be read as evidence on stated acceptance under a controlled hypothetical condition, not as a direct estimate of market demand.

The ordered logit model nonetheless clarifies which perceptions matter most. Model fit is acceptable for an exploratory specification (McFadden's pseudo- $R^2 = 0.113$; McKelvey & Zavoina's $R^2 = 0.314$; Count $R^2 = 0.544$). Negative coefficients are concentrated on symbolic and sensory reservations. Seeing dealcoholized wine as “not real wine” has one of the strongest negative associations with conditional price acceptance ($\beta = -0.756$, $p = 0.001$), and expecting a more diluted/bland taste also reduces acceptance ($\beta = -0.359$, $p = 0.048$). These associations are consistent with the interpretation that consumers are not merely discounting dealcoholized wines because of lower ethanol

content: the item-level indicators of perceived inauthenticity and expected dilution are negatively associated with acceptance, consistent with prior evidence that perceived deviations from traditional norms carry a psychological cost (Bruwer et al., 2011; Masson and Aurier, 2017).

By contrast, health motivation is strongly positive ($\beta = 0.448$, $p < 0.001$), as is perceived suitability for food pairing ($\beta = 0.761$, $p < 0.001$). Curiosity has a smaller positive association ($\beta = 0.192$, $p = 0.020$), as does feeling comfortable ordering dealcoholized wine in the presence of traditional-wine drinkers ($\beta = 0.135$, $p = 0.035$). The positive coefficient on limited availability ($\beta = 0.212$, $p = 0.007$) is best interpreted cautiously, as it may reflect latent interest among respondents who are already open to the category. By contrast, greater concern about price/value ($\beta = -0.160$, $p = 0.042$) and about minors and alcohol ($\beta = -0.167$, $p = 0.008$) is associated with lower conditional price acceptance.

Socio-demographic controls are comparatively weak. Compared with the 55-64 reference group, respondents aged 18-54 tend to exhibit lower conditional price acceptance, whereas income and gender are largely non-significant. For the age variable, the 55-64 age group was specified as the reference category because it represented the modal age class in the sample, providing a stable benchmark for interpreting differences across age groups. As with any dummy-coded specification, the resulting coefficients capture relative differences with respect to this reference group rather than absolute age effects (Table 4).

The teetotal coefficient is positive but clearly non-significant. This is theoretically informative: abstainers are not necessarily the natural early market for dealcoholized wine. Once health motives, social inclusion, and product perceptions are taken into account, teetotalers do not appear systematically more willing to assign value to a wine-based product. A plausible interpretation is that many are not seeking wine substitutes at all and may be relatively detached from wine-centered occasions, so the promise of social compatibility does not automatically translate into greater acceptance of higher prices.

Against the backdrop of the December 2024 Ministerial Decree, these findings drawn from a wine-involved and educated sample suggest that regulatory authorization is a necessary but not sufficient condition for market growth. The new legal framework may increase supply, visibility, and institutional legitimacy, but it does not remove the core barriers identified here. In the short run, the Italian dealcoholized wine market is more likely to expand as a situational complement, especially in work-

Table 4

Determinants of conditional price acceptance for dealcoholized wine (ordered logit regression results, N = 636).

Variable Name	Response Option	Coefficient	Std. Error
Conditional price acceptance			
Age group	18 to 24	-0.743**	0.334
	25 to 34	-0.854**	0.282
	35 to 44	-0.602**	0.288
	45 to 54	-0.823***	0.248
	55 to 64	baseline category	
	65+	-0.358	0.288
Gender	Female	0.073	0.175
Income	< 20.000 €	baseline category	
	20.000 to	-0.472	0.339
	35.000 €		
	35.000 to	0.078	0.361
	50.000 €		
	50.000 to	-0.519	0.360
	70.000 €		
	> 70.000 €	-0.031	0.344
	Prefers not to answer	-0.391	0.363
Wine experience	Yes	-0.372	0.297
Teetotal	Yes	0.208	0.309
Drinks daily	Yes	-0.171	0.384
Drinks weekly	Yes	-0.084	0.187
Heard of dealcoholized wines	Yes	-0.199	0.263
Dealcoholized wine self-perception	Scale 1 to 5	0.104	0.143
Expected taste of dealcoholized wine	I do not have a clear idea	baseline category	
	Slightly less structured	0.053	0.192
	More diluted/ bland	-0.359*	0.244
	More or less the same	0.321	0.280
Concerns	Less pleasure	-0.225	0.166
	Not real wine	-0.756***	0.175
Motivations	Health	0.448***	0.093
	Safety	-0.080	0.090
	Medical	0.091	0.085
	Curiosity	0.192**	0.083
	Social inclusion	-0.145	0.088
	Religion	0.044	0.076
	Lighter sensation	-0.125*	0.083
Barriers	Price	-0.160**	0.079
	Limited availability	0.212***	0.079
	Social acceptance	-0.128	0.073
Perceived suitability of dealcoholized wine for food pairing	Yes	0.761***	0.208
Perceived influence of social context or company on the choice of dealcoholized wine	Scale 1 to 5	0.043	0.066
Comfort ordering a dealcoholized wine in a venue with friends drinking traditional wine	Scale 1 to 5	0.135**	0.064
Concern about minors and alcohol	Scale 1 to 5	-0.167***	0.063
Cut1		-1.309	0.590
Cut2		-0.429	0.588
Cut3		0.777	0.587
Cut4		4.265	0.612
Cut5		5.471	0.657
Cut6		7.293	0.922
Observations (N)		636	

related, driving-related, or health-constrained contexts, than as a full substitute for conventional wine in celebratory or identity-laden occasions. A useful next step for research would be to test more directly whether situational acceptability interacts with health orientation, and whether specific labelling, packaging, or communication strategies can reduce the authenticity penalty identified in this study.

5. Conclusions

At a time of regulatory change in the Italian wine market, this study analyzed consumer perceptions of dealcoholized wines. The results show a market caught between the functional promise of these products and the sensory expectations tied to a deep-rooted wine culture. Within the relatively affluent, highly educated, and wine-involved segment captured by our sample, respondents perceive dealcoholized wine as innovative yet inauthentic, healthier yet less tasty, and socially acceptable only in specific situations. These patterns are consistent with the conceptual organizing framework articulated in the literature review, which treats health-related, sensory, authenticity, and situational considerations as theory-informed categories rather than validated constructs. Because each dimension is captured through item-level indicators rather than psychometric scales, these interpretations are necessarily tentative.

The primary barrier to adoption is a profound skepticism about both sensory quality and authenticity. Expectations of poor taste, structure, and quality are the most significant hurdles, proving more influential than concerns about price or social stigma. This is intricately linked to a perceived lack of authenticity; for many, alcohol is not merely an ingredient but a core component of a wine's identity, and its removal constitutes a break from tradition that erodes the product's legitimacy. In our regression analysis, the perception that dealcoholized wine is “not real wine” shows one of the strongest negative associations with conditional price acceptance, underscoring the importance of symbolic legitimacy alongside sensory performance. Consequently, consumer price acceptance might be directly contingent on overcoming this sensory deficit and credibly addressing doubts about authenticity. While nearly half of this segment is open to price parity for a dealcoholized wine with guaranteed taste satisfaction, a similarly sized share demands a substantial discount, viewing the product as inherently less valuable regardless of its sensory performance.

The acceptance of dealcoholized wines is also highly situational. The findings show a clear partitioning of consumption occasions in our sample: these products are deemed appropriate and even desirable in functional contexts where sobriety is an asset, such as business lunches, professional events, or situations involving driving and early workdays, but face strong resistance in hedonic or ritualized contexts where conventional wine symbolizes celebration, conviviality, and status. This segmentation is consistent with the emergent “mindful drinking” pattern, where consumers do not seek to remove alcohol from all occasions but to selectively reduce it in specific contexts. In other words, dealcoholized wines are integrated into consumers' repertoires as context-dependent tools rather than global substitutes. This suggests that, for now, consumers view dealcoholized wine not as a direct substitute for traditional wine, but as a situational complement to be deployed strategically.

These findings have practical relevance, but they should be interpreted cautiously. In particular, they are derived from a relatively wine-involved, highly educated, and economically advantaged subsample, which may be more receptive to nuanced authenticity and quality arguments than the average Italian consumer; the recommendations below should therefore be read as most directly applicable to this segment and as hypotheses to be tested in more representative populations. The present study shows that legitimacy cues matter to consumers, yet it does not test which framing strategies are actually effective. The results therefore support a more limited conclusion: future research should examine whether specific labelling, packaging, shelf-placement, and communication interventions can reduce authenticity concerns and increase substitution toward dealcoholized wine. In the meantime, the evidence suggests that any near-term market growth in Italy is more likely to come from functionally advantageous occasions than from a wholesale replacement of conventional wine in ritualized settings.

Second, communication should consider that merely highlighting

health and safety benefits might be insufficient. Marketing narratives should also directly address the authenticity deficit by framing dealcoholized products as legitimate extensions of the wine tradition rather than artificial deviations. This involves leveraging familiar symbolic cues, as our data shows an overwhelming consumer preference for traditional glass bottles and clear, precise labelling. The innovation should be inside the bottle, while the outside signals continuity and quality. Third, market positioning should be targeted and context-specific. Rather than competing directly with traditional wine in all settings, the most viable entry strategy is to target the functional occasions where consumers are already receptive. Focusing distribution and promotion on channels such as business catering and restaurant lunch menus can build a consumer base and normalize consumption. In parallel, carefully designed in-store placements and communication in specialized wine shops can reinforce the message that dealcoholized wines belong within the wine universe, while still addressing specific health and functional needs.

Beyond these practical implications, the study contributes to the wider literature on consumer responses to “better-for-you” versions of culturally entrenched products. It suggests that, in a traditional wine market, health-related benefits can generate interest in dealcoholized wines. Still, acceptance appears to depend on whether consumers can reconcile these benefits with expectations about taste, authenticity, and situational fit. This highlights the importance of treating dealcoholized wines not only as functional innovations but also as symbolic goods whose legitimacy must be actively constructed.

5.1. Limitations and future research

Several limitations of this study should be acknowledged. The primary limitation stems from the use of a non-probabilistic, quota-based referral sampling method. While controls were implemented to enhance the sample's heterogeneity, this approach is susceptible to selection biases, such as homophily, and does not ensure statistical representativeness. Therefore, the findings, particularly the descriptive statistics, should be interpreted as indicative of the relationships and attitudes within our sample rather than precise estimates of population-wide parameters. Future research employing stratified random sampling could validate these findings on a nationally representative scale. Given the over-representation of highly educated and higher-income consumers in our study, subsequent work should also explicitly compare early adopters with more price-sensitive and less involved consumer groups.

Second, the stated price preference data, like all stated preference data, is hypothetical and may not perfectly reflect real-world purchasing behavior. Although the conditional framing of the question adds a layer of realism, actual market transactions are subject to a wider array of contextual influences that could alter consumer choices. In addition, our payment ladder is not incentive-compatible, and responses may be affected by hypothetical bias and social desirability, particularly in a context where “mindful drinking” is increasingly portrayed as a socially desirable behavior. Future studies could complement survey-based approaches with experimental auctions, discrete choice experiments or field experiments using actual purchase data to obtain behaviorally grounded measures of demand and price sensitivity.

Finally, the cross-sectional design of the study captures a snapshot of consumer perceptions at a specific point in time. Given the novelty of dealcoholized wines in the Italian market, consumer attitudes are likely to evolve rapidly as product availability increases, sensory quality improves, and social norms surrounding dealcoholized consumption become more established. Longitudinal research would be invaluable for tracking the trajectory of these perceptions over time. A further limitation is that our operationalization of “health” focuses predominantly on reduced alcohol content, without explicitly addressing other nutritional dimensions such as sugar and calorie content. Future research should integrate measures of perceived nutritional profiles and examine how

these interact with alcohol reduction to shape both health evaluations and willingness to pay. In addition, qualitative and mixed-methods designs could deepen understanding of the symbolic and identity-related meanings associated with dealcoholized wine, complementing the attitudinal and econometric evidence presented here.

Ethical statement

All procedures involving human participants were performed in accordance with the ethical standards of the authors' institution and the Committee on Publication Ethics (COPE). Throughout the research process, we adhered strictly to ethical standards for survey research involving human subjects. At the start of the survey, each participant was presented with an informed consent statement explaining the study's purpose, the voluntary nature of participation, and the measures taken to protect their data. Only those who explicitly consented could proceed, ensuring active informed consent in line with European research ethics protocols. Participants were assured anonymity; no identifying personal data was collected in the questionnaire. All responses were recorded and stored in aggregate form, and results are reported only in summary, preventing any individual from being identified. These practices comply with the EU's General Data Protection Regulation (GDPR). Furthermore, the online survey platform was configured not to record IP addresses or geolocation details, thereby enhancing anonymity.

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CRediT authorship contribution statement

Giordano Ruggeri: Writing – review & editing, Writing – original draft, Methodology, Formal analysis, Data curation, Conceptualization. **Chiara Mazzocchi:** Writing – review & editing, Supervision, Methodology, Conceptualization. **Tommaso Selicorni:** Investigation, Data curation.

Declaration of competing interest

The authors have no conflicts of interest to declare.

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Supplementary materials

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Data availability

The data that support the findings of this study are available on request from the corresponding author.

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