

What internal characteristics could explain US wineries targeting upper-tier price segments?

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Abstract

Purpose – This paper aims to examine how internal strategic and organizational characteristics are associated with upper-tier list-price positioning among US wineries, moving beyond accounts that focus mainly on terroir or regional reputation. Four directional hypotheses, derived from portfolio-focus, resource-based, signaling and cluster-theory perspectives, are tested.

Design/methodology/approach – This study analyses original survey data for 175 wineries in 25 US states. Respondents allocated production volume across four retail list-price bands (Value, Premium, Luxury and Iconic); upper-tier positioning is operationalized as a binary indicator equal to 1 when a volume-weighted price-band index exceeds the Premium/Luxury midpoint – equivalently, for nearly all wineries, when at least half of production volume lies at $\geq \$40$ per 750 ml. Nested binary logits, an ordered logit and a mixed-effects ordered logit with a state random intercept are estimated, with the cutoff itself subjected to a systematic sensitivity analysis. Explanatory variables cover production scale, portfolio breadth, vertical integration, diversification, human and organizational capital, sustainability certification and regional location.

Findings – Upper-tier list-price positioning is more often reported by wineries that have operated longer, are organized as LLCs or corporations, source a higher share of grapes from their own vineyards and hold organic or biodynamic certification. A focused portfolio with fewer wine types and labels is positively associated with concentrating volume in Luxury/Iconic tiers, while tourism-intensive diversification into food/events and hospitality is negatively associated with upper-tier positioning. The four pre-stated hypotheses receive broad support, and the results are robust across model specifications and across alternative definitions of upper-tier positioning, although premium list-price positioning remains strongly clustered in California.

Research limitations/implications – The cross-sectional design supports associational rather than causal inference, and the dependent variable captures list-price positioning rather than realized prices or revenue. The sample skews toward medium- and large-sized producers and uses fixed pre-defined price bands. Residual regional confounding cannot be fully ruled out. Future research should test these patterns with longitudinal data, quasi-experimental designs based on certification waves, comparative cross-region studies and peer-benchmarked price measures.

Practical implications – For wineries seeking to move into or sustain upper-tier price segments, the results of this study suggest concrete strategic priorities: maintaining a focused product portfolio, avoiding tourism-intensive diversification that may dilute wine-centered identity, building accumulated organizational capabilities and stable labor structures, strengthening vertical integration in grape sourcing and adopting credible sustainability certifications.



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Originality/value – To the best of the authors' knowledge, this is one of the first US-wide, firm-level studies to test, within an integrated hypothesis-testing framework, whether portfolio focus, internal capabilities, vertical integration, diversification choices and certified sustainability are correlated with premium list-price positioning, using volume-weighted price-tier shares and multiple complementary regression frameworks.

Keywords Marketing strategy, United States of America, Wines, Logit/ probit/ Tobit, Regression, Survey research, Pricing

Paper type Research paper

1. Introduction

Over the past few decades, the US wine industry has undergone a significant transformation, shaped by evolving consumer preferences, the expansion of domestic wine regions and the growth of retail and direct-to-consumer channels (Higgins *et al.*, 2015; Villanueva *et al.*, 2015; Hart and Alston, 2020; Loose and del Rey, 2024). Historically, discussions of American fine wine have centered on iconic California appellations, particularly Napa and Sonoma. Napa's status as a premier US wine-producing region is well established, although scholars also recognize that high-quality wine production has expanded well beyond California's most prestigious regions (Hira and Swartz, 2014). The maturation of wine regions such as Oregon, WA, New York, TX and other East Coast areas has contributed to greater regional differentiation, intensified competition and increasing niche specialization across the US wine industry (Hira and Gabreldar, 2013; Villanueva and Ferrer, 2020; Lim and Reed, 2020).

In this increasingly competitive environment, upper-tier price positioning has become a strategic priority for wineries. Price is not merely a reflection of production cost; it also operates as an extrinsic cue through which consumers infer quality, reputation and market status, particularly when they lack direct experience with a winery, brand, vintage or region (Lockshin *et al.*, 2006; Aqueveque, 2008; Storchmann, 2012; Kaimann *et al.*, 2023; Hafner, 2025). In premium and luxury wine segments, price can also contribute to broader narratives of scarcity, prestige, authenticity, craftsmanship and uniqueness (Beverland, 2006; Mora and Livat, 2013). Wineries seeking to compete in these segments must, therefore, align price with credible quality signals, brand narratives, production choices and distribution strategies that can be justified to both trade intermediaries and end consumers (Cardebat and Figuet, 2004; Ingrassia *et al.*, 2020; Martínez-Navarro and Sellers-Rubio, 2024).

Much of the existing literature on premium wine positioning emphasizes external or market-facing signals, including terroir, appellation, regional reputation, expert ratings, awards and consumer perceptions of authenticity (Aurier *et al.*, 2005; Sáenz-Navajas *et al.*, 2013; Ferreira *et al.*, 2021). These factors remain central to understanding wine valuation. However, a focus on external signals alone risks overlooking the internal strategic and organizational characteristics that may help wineries sustain higher price positioning. Production scale, vineyard ownership, product portfolio structure, diversification into hospitality or tourism, human capital, organizational form and sustainability certification may all shape a winery's ability to concentrate a substantial share of its production in upper-tier price segments.

This article examines which internal characteristics are associated with upper-tier list-price positioning among US wineries. Using original survey data from 175 wineries across 25 US states, the article analyzes whether firm-level attributes, including production scale, portfolio breadth, vertical integration, diversification, human and organizational capital, sustainability certification and regional location, are associated with the likelihood of upper-tier positioning, operationalized in Section 3.2.1 as a volume-weighted price-band index exceeding the Premium/Luxury midpoint. By focusing on volume-weighted price-tier shares

rather than average bottle prices alone, the article provides a more granular view of how wineries position their portfolios across market segments.

The article contributes to wine business and economics in three ways. First, it shifts attention from region- and terroir-centered explanations of premium positioning toward internal strategic and organizational characteristics. Second, it jointly examines several firm-level factors that are often studied separately, including portfolio focus, vertical integration, diversification, human capital and certified sustainability. Third, it provides US-wide empirical evidence from wineries operating across both established and emerging regions. In doing so, the article helps clarify whether upper-tier price positioning is mainly a function of regional prestige or also associated with strategic choices and organizational resources that wineries can develop internally.

This article proceeds as follows. The next section reviews theoretical and empirical studies on price positioning, quality signals, internal capabilities, portfolio strategy, diversification and sustainability in wine markets. The methodology and data set are then described, followed by the regression results. The final sections discuss the implications of the findings for premium wine strategy and identify avenues for future research on the evolving structure of US wine production and consumption.

2. Literature review

2.1 Price positioning and quality signals in wine markets

Pricing occupies a central position in wine economics because it functions both as an economic outcome and as a strategic signal. Hedonic pricing studies have consistently shown that wine prices are shaped by a combination of observable and reputational attributes, including grape variety, brand, geographic origin, vintage, producer reputation, expert ratings and collective regional reputation (Landon and Smith, 1998; Lecocq and Visser, 2006; Outreville and Le Fur, 2020; Chandra and Moschini, 2022). These studies demonstrate that wine prices are not determined solely by production costs or physical characteristics, but also by the market value attached to symbolic, reputational and informational cues.

The signaling function of price is particularly important because wine is an experience good. Consumers often make purchase decisions before they can directly evaluate sensory quality and, therefore, rely on extrinsic cues such as price, region, brand, reputation, medals, expert ratings and label information (Cardebat and Figuet, 2004; Lockshin and Corsi, 2012; Oczkowski and Doucouliagos, 2015; Castriota, 2020; Villanueva, Depetris Chauvin and Pinilla, 2023). However, the relationship between price and quality is complex. Meta-analytic and empirical research suggests that the correlation between wine prices and quality ratings is positive but moderate, indicating that price operates as an imperfect but influential signal of quality (Oczkowski and Doucouliagos, 2015). Recent evidence further suggests that quality premia are especially pronounced among highly rated or “superstar” wines, where reputational and scarcity effects may amplify the relationship between perceived excellence and market value (Castriota *et al.*, 2022; Kaimann *et al.*, 2023).

From a strategic perspective, price segmentation enables wineries to organize products across distinct market categories and communicate differentiated value propositions. The classification of wines into value, premium, luxury and iconic segments allows firms to target consumers with varying expectations, levels of involvement and willingness to pay (Costanigro *et al.*, 2007; Thach and Olsen, 2015). In upper-tier segments, price also contributes to broader narratives of scarcity, prestige, authenticity, craftsmanship and exclusivity. Limited availability can increase perceived value by reinforcing rarity and desirability, particularly in luxury-oriented categories (Zhao, 2009; Wang *et al.*, 2024). This dynamic is especially evident in the market for cult wines,

where limited supply and strong demand may enhance prestige and sustain future price premia (Okhunjanov *et al.*, 2025).

Nevertheless, price-based positioning is credible only when supported by other quality signals. Wine's agricultural origin makes terroir, vintage conditions, appellation and regional reputation especially relevant to consumer evaluation and market valuation. Studies of vineyard and wine prices show that appellations and collective reputations often carry substantial economic value, even when the direct effects of specific biophysical site characteristics are difficult to isolate (Cross *et al.*, 2011; Cross *et al.*, 2017; Masset, 2024). External endorsements, including critic scores, professional ratings, guide listings, medals and designations of origin, further reduce consumer uncertainty and contribute to perceived quality (Frick and Simmons, 2013; Oczkowski and Doucouliagos, 2015; Kaimann *et al.*, 2023). The literature, therefore, establishes that upper-tier wine positioning is shaped by a combination of price, reputation, origin, third-party evaluation and symbolic market cues.

2.2 Internal capabilities and resource-based explanations of premium positioning

Although external signals play an important role in wine valuation, upper-tier price positioning also depends on firm-level resources and capabilities. The resource-based view provides a useful framework for understanding why some wineries may be better positioned than others to compete in premium segments. According to this perspective, firms can sustain competitive advantage when they possess resources and capabilities that are valuable, rare, difficult to imitate and embedded in firm-specific routines (Barney, 1991; Kor and Mahoney, 2005). In the wine industry, such resources may include accumulated production experience, managerial capabilities, technological knowledge, specialized human capital, vineyard expertise and the ability to coordinate viticultural, cellar, marketing and distribution decisions in distinctive ways (Capasso *et al.*, 2015; Dressler, 2015; Duarte Alonso and Bressan, 2016; Ferrer *et al.*, 2018; Depetris Chauvin and Villanueva, 2024).

Human and organizational capital are particularly relevant in premium wine markets because quality results from repeated, interdependent decisions across the production and commercialization processes. Grape sourcing, vineyard management, fermentation, aging, blending, bottling, labeling, distribution and communication all influence how quality is produced and perceived. Research on small firms and wineries suggests that specialized technical knowledge, managerial experience, permanent employees and formally trained winemakers can improve organizational performance and strengthen a winery's capacity to communicate quality, consistency and authenticity (Unger *et al.*, 2011; Martín-Hidalgo and Pérez-Luño, 2022; Martínez-Falcó *et al.*, 2024). These capabilities may enable wineries to transform regional, agricultural and reputational assets into more coherent premium market positions.

Vertical integration also constitutes an important internal strategic characteristic. Wineries that source a larger share of grapes from their own vineyards may exercise greater control over grape quality, vineyard practices, harvest timing and production standards. Estate-based or vineyard-linked production can also reinforce authenticity, traceability and credibility by connecting quality claims to concrete production practices. While terroir and regional reputation remain external or place-based signals, control over vineyard inputs may strengthen a winery's ability to deliver consistent quality and support upper-tier price positioning.

2.3 Production scale, scarcity and portfolio focus

Production scale is a central strategic dimension in premium wine positioning. Smaller production volumes may reinforce perceptions of exclusivity, artisanal care and scarcity, while larger-scale operations may benefit from operational efficiencies, wider distribution and broader

market coverage. This creates an important strategic tension. Expanded production can increase revenues and improve market access, but it may also weaken the authenticity and exclusivity that often underpin premium and luxury positioning (Beverland, 2005; Beverland *et al.*, 2010). For wineries seeking to operate in upper-tier price segments, scale must, therefore, be managed as not only an efficiency issue but also a brand-positioning concern.

Product portfolio structure is closely related to this tension. Wineries may develop broad portfolios that include multiple varietals, blends, labels and price points to reduce market risk and appeal to diverse consumer segments. However, broad portfolios may also pose challenges for brand coherence, particularly when lower-priced or less differentiated products are not clearly differentiated from flagship offerings. Research on winery brand strategy indicates that portfolio consistency can strengthen brand equity, whereas fragmented or poorly differentiated product architectures may undermine perceptions of quality and strategic coherence (Dressler and Paunovic, 2021a; Dressler and Paunovic, 2021b). In premium wine markets, focused portfolios may reinforce specialization, craftsmanship and exclusivity, thereby supporting value creation and premium positioning (Werdelmann, 2014).

Luxury-branding theory further supports the importance of focus, coherence and controlled accessibility. Luxury brands are typically associated with superior quality, prestige, authenticity, emotional value and the ability to command price premiums (Ko *et al.*, 2019). In upper-tier wine markets, these characteristics are especially relevant because high-end wines are purchased for not only sensory attributes but also symbolic value, including the signaling of taste, status, cultural capital and refined consumption knowledge (Beverland, 2005; Zhao, 2009). Consumer psychology research similarly shows that luxury buyers seek status, exclusivity, emotional rewards and identity value (Vigneron and Johnson, 2004; Wiedmann *et al.*, 2009). Evidence from luxury markets also suggests that downward line extensions and overly accessible offerings can weaken perceptions of luxury when they reduce exclusivity, prestige or brand fit (Royo-Vela and Sánchez, 2022). These findings suggest that portfolio focus may be particularly important for wineries seeking to preserve upper-tier positioning.

2.4 *Diversification, wine tourism and strategic coherence*

Diversification into non-wine activities has become increasingly important in the wine industry. Hospitality, wine tourism, events, food service, lodging and related agricultural or cultural ventures can provide wineries with additional revenue streams, strengthen consumer engagement and support resilience in competitive markets. Recent research on the wine sector servitization shows that wineries increasingly incorporate services into their core offerings, although the degree of service-based revenue varies across regions and firm types (Depetris Chauvin, 2025). Wine tourism and hospitality may, therefore, serve as complementary extensions of the winery business model by enhancing visitor experiences, deepening brand relationships and supporting direct-to-consumer sales (Villanueva and Moscovici, 2016; Villanueva and Ferrer, 2020; Gómez-Carmona *et al.*, 2023).

At the same time, diversification may generate strategic tensions for wineries positioned in upper-tier segments. Agritourism research shows that some winery owners resist or limit tourism activities because such activities may conflict with producer identity, family-firm values or the specialized image associated with wine production (Canovi, 2019; Canovi and Lyon, 2022). From a core-competence perspective, diversification is more likely to create value when it reinforces the firm's distinctive capabilities rather than distracting from them (Prahalad and Hamel, 2006). For wineries, this means hospitality, events, food service and tourism activities must be carefully integrated to support rather than dilute wine-related prestige, authenticity and brand narrative.

The relationship between diversification and upper-tier positioning is, therefore, theoretically ambiguous. On one hand, tourism and hospitality can strengthen consumer attachment, increase direct sales and provide experiential evidence of quality and authenticity. On the other hand, extensive or poorly integrated diversification may weaken perceptions of specialization and shift attention away from wine quality. This tension is particularly relevant for wineries seeking to maintain a premium identity while also developing complementary service-based revenue streams.

2.5 Sustainability certification as a premium-positioning signal

Sustainability has become increasingly important in discussions of wine positioning, particularly as consumers, trade intermediaries and regulators place greater emphasis on environmental responsibility. Environmental certifications, including organic, biodynamic and broader sustainability labels, can function as credible signals of authenticity, production care and ecological commitment (Schäufele and Hamm, 2017; Capitello and Sirieix, 2019). These signals may be especially valuable in premium markets, where consumers often associate artisanal quality and authenticity with responsible production practices.

Evidence from willingness-to-pay studies indicates that many consumers are prepared to pay premiums for wines associated with sustainable production, although the magnitude of these premiums varies across certification types, consumer segments, markets and information conditions (Lessem and Delmas, 2017; Scozzafava *et al.*, 2021; Gastaldello *et al.*, 2025). Gastaldello *et al.* (2025), for example, estimate an average willingness-to-pay premium of approximately 15% for sustainable wine. Fanasch and Frick (2020) further show that certification plays a crucial role in converting sustainability claims into price premiums, especially for biodynamic wines. This finding underscores the importance of credibility: sustainability claims are more likely to support premium positioning when they are formalized, verifiable and effectively communicated.

Sustainability certification may, therefore, serve both as an internal strategic choice and as a market-facing signal. Internally, it reflects production practices, organizational priorities and resource commitments. Externally, it communicates authenticity, environmental responsibility and differentiation to consumers and intermediaries. When credibly certified, sustainability can, thus, contribute to premium positioning by linking production methods with broader narratives of quality, care and ethical value.

2.6 Research gap

The literature demonstrates that premium wine positioning is shaped by a combination of external quality signals and internal strategic characteristics. External signals – including terroir, appellation, regional reputation, critic scores, ratings and symbolic associations – remain central to consumer evaluation and willingness to pay. However, the ability to sustain upper-tier price positioning may also depend on firm-level characteristics under more direct managerial control, including production scale, vertical integration, product portfolio structure, organizational form, human capital, diversification activities and sustainability certification.

Despite growing attention to these individual dimensions, comprehensive empirical models that jointly examine multiple internal characteristics remain limited. This gap is especially significant in the US wine industry, where established California producers coexist with wineries in emerging regions and where firms face increasing domestic and international competition. A more integrated approach is, therefore, needed to clarify whether upper-tier price positioning is mainly associated with external regional prestige or also linked to strategic and organizational characteristics that wineries can develop internally.

Building on this gap, the present article proposes that upper-tier wine price positioning is not explained solely by regional reputation but by the combined influence of internal strategic choices, organizational capabilities, credible market signals and place-based reputation. The literature suggests that premium positioning may be associated with portfolio focus, strategic coherence, vertical integration, human and organizational capital, sustainability certification and regional context. Accordingly, this article advances the following hypotheses:

- H1. Wineries with more focused product portfolios, reflected in fewer wine types and labels, are more likely to be positioned in upper-tier list-price segments than wineries with broader and more fragmented portfolios.
- H2. Wineries that engage more extensively in consumer-facing diversification, such as hospitality, food, events and tourism-intensive activities, are less likely to be positioned in upper-tier list-price segments.
- H3. Wineries with stronger internal capabilities and credible production-related signals, including greater organizational experience, more stable labor structures, higher shares of own-harvest grapes and formal organic or biodynamic certification, are more likely to be positioned in upper-tier list-price segments.
- H4. Wineries located in established fine-wine regions are more likely to be positioned in upper-tier list-price segments than wineries located in emerging or less recognized regions.

3. Methodology

3.1 Data collection and sampling

This article draws on primary data collected from US wineries across established and emerging regions. The sampling frame was constructed from comprehensive lists compiled by regional, local and national institutions, yielding a total population of 8,410 wineries. The survey was distributed over an extended period between March 2020 and September 2020. We attempted to contact the entire identified population of 8,410 wineries. Following efforts to verify email addresses and establish accurate contact information, we successfully reached 5,533 wineries. The survey was distributed via an online link. Potential respondents – specifically senior decision-makers such as owners, CEOs or general managers – were initially contacted by email and, in some instances, by telephone. Once a manager acknowledged receipt of the invitation, the link was shared. A follow-up protocol was used to confirm receipt of completed surveys and express gratitude and to address any questions that arose during data entry. All variables used in estimation are firm-level constructs derived from the survey; no respondent-level demographics are used in statistical models.

Of the 5,533 contacted wineries, 182 provided complete responses, for a response rate of 3.3%. After screening for missing values in key variables used in the regression analysis, including financial and production metrics, the final data set for estimation comprised 175 observations across both well-established and emerging wine-producing regions. A key feature of the sampling strategy was proportional geographic representation. Because approximately half of the wineries in the USA are located in California, the sampling frame reflected this distribution: about half of the wineries listed and contacted were California wineries. This proportional pattern was also reflected in the completed survey responses, of which 75 (43%) came from California. The remaining responses were collected from wineries across 24 additional states, including Oregon (15, 9%), WA (14, 8%) and New York (12, 7%). Additional states with notable representation include Michigan (7, 4%), Virginia (7, 4%), PA (6, 3%) and Missouri (4, 2%). These states were also represented proportionally,

with the number of wineries listed, contacted and responding from each state reflecting, as closely as possible, that state's relative share of the overall US winery population. This approach ensured that the data set captured both California's dominant role in the US wine industry and the geographic diversity of wineries across established and emerging regions. Producers were selected based on their willingness to share insights into production metrics, strategic choices and organizational characteristics. Initial screening criteria included possession of a valid US winery license, production of at least one commercial wine label and willingness to disclose basic operational information, such as production volume and staffing.

This sample, although substantial for an in-depth survey, represents only a small fraction of US wineries. For context, roughly 11,000 wineries operated in the USA around 2021 ([WineBusiness Analytics, 2025](#)). Consequently, the data set is not fully representative of all US wineries. In particular, there is a risk of self-selection bias – wineries that chose to participate may systematically differ from the average US winery. Industry data indicate that more than half of US wineries produce under 1,000 cases annually, and over 80% produce fewer than 5,000 cases ([WineBusiness Analytics, 2025](#)). Our respondent wineries tend to be larger on average (the median production volume in our sample corresponds to roughly 2100 cases per year). This suggests that smaller, limited-production wineries are underrepresented in our survey. We have nonetheless endeavored to capture a broad spectrum of firm sizes and types in our sample – respondents range from boutique wineries to high-volume producers across 25 states – but we acknowledge that it skews toward medium- to large-sized wineries. As such, the findings should be generalized with caution. Despite these limitations, the diversity in our sample provides useful insights into various strategic behaviors, though it may not perfectly reflect the modal US winery ([WineBusiness Analytics, 2025](#)).

3.2 Variable operationalization

3.2.1 Dependent variable. We operationalize a winery's price positioning using self-reported retail list-price segments for a standard 750 ml bottle. Respondents allocated their annual production volume across four price bands: Value (under \$10), Premium (\$10 to under \$40), Luxury (\$40 to under \$100) and Iconic (\$100 and above). The four shares sum to 100%. The dependent variable measures positioning along this ordered band scheme; it does not measure the price of any individual bottle, and inferences from it are, therefore, associational rather than causal. To summarize each winery's portfolio in a single ordered measure, we assign integer values to the four bands – 1 = Value, 2 = Premium, 3 = Luxury and 4 = Iconic – and compute a volume-weighted price-band index. Let s_V , s_P , s_L and s_I denote the percentages of production volume in the Value, Premium, Luxury and Iconic bands ($s_V + s_P + s_L + s_I = 100$). The weighted index is as follows:

$$I = (s_V + 2 \cdot s_P + 3 \cdot s_L + 4 \cdot s_I) / 100,$$

So that I lies between 1 (all volume in Value) and 4 (all volume in Iconic). The binary dependent variable is then:

$$DV = 1 \text{ if } I > 2.5; \quad DV = 0 \text{ otherwise.}$$

The threshold $I = 2.5$ is the midpoint between Premium (=2) and Luxury (=3): a winery satisfies $DV = 1$ when its weighted average band position lies strictly above the Premium/Luxury boundary – that is, when its production is, on a volume-weighted basis, predominantly above the \$40 mark. For nearly every observation this criterion coincides with placing at least half of

production volume in the Luxury or Iconic bands; the two rules differ only for a small number of wineries whose volume is split exactly between adjacent bands. We adopt the weighted-index rule because it uses information from the full volume-share distribution and does not depend on whether any single tier alone crosses a 50% threshold.

For ordered-outcome robustness, we additionally collapse positioning into four mutually exclusive tiers by assigning each winery to the price band that corresponds to its largest share of production volume: Value, Premium, Luxury or Iconic. The resulting distribution is Premium = 133 (76.0%), Luxury = 29 (16.6%) and Iconic = 13 (7.4%). No winery reported a dominant Value tier, so the ordered variable effectively includes only three categories.

Because the dependent variable is a function of the volume-share distribution across the four bands, we conducted a systematic sensitivity analysis on the rule used to identify upper-tier positioning. In addition to the original rule ($I > 2.5$), we re-estimated the full-specification model under four alternative definitions:

- (1) at least 40% of volume in Luxury or Iconic;
- (2) at least 50%;
- (3) at least 60%; and
- (4) the modal price band of the winery is either Luxury or Iconic.

The five specifications are reported side by side in Table A1 of the Supplementary File. The signs and significance of the key coefficients are preserved across all of them, indicating that the findings are not artefacts of the specific rule used to construct the dependent variable.

Sensitivity analyses on the nominal price thresholds themselves (\$10, \$40 and \$100) are not feasible by survey design. The questionnaire collected volume shares only for these pre-defined bands, so the data do not permit reconstructing the volume distribution under different thresholds (e.g. \$35 or \$50). We chose these four bands deliberately: they match the segmentation most widely used in US wine trade publications and in the price-tier literature (Costanigro *et al.*, 2007; Thach and Olsen, 2015), and they are anchored at round price points that wineries and consumers routinely use. The implications of this choice are discussed below and in the Limitations section.

Two further features of the classification warrant comment. First, the band boundaries are fixed nominal thresholds. Because US retail wine prices have risen over time, a scheme anchored to earlier price points will tend to leave the lowest band sparsely populated, and the results should accordingly be read as describing positioning differences among Premium-and-above producers rather than across the full retail price spectrum. Second, no winery in our sample reported the majority of its volume in the Value tier (below \$10). We interpret this absence as reflecting the sampling characteristics documented in Section 3.1 rather than the structure of the US industry as a whole: the respondent pool skews toward medium- and large-sized producers and under-represents the small, limited-production wineries that most often compete in the lowest band. The Value tier is, therefore, retained in the definition for completeness, but the empirical analysis effectively contrasts upper-tier (Luxury/Iconic) positioning against Premium positioning. We acknowledge this as a boundary condition on the generalizability of the findings.

3.2.2 Key independent variables. The covariate block presented in Table 1 includes variables capturing production scale, portfolio breadth, vertical integration in grape sourcing, diversification into consumer-facing and B2B activities, human and organizational capital, a certified sustainability dummy (organic/biodynamic) and regional controls. We do not include digital marketing variables because these were not observed in the survey, despite their documented importance in the wine marketing literature:

Table 1. Description of the key independent variables used in the analysis

Variable	Type	Definition/construction
Years operating	Continuous	Years since founding / first commercial release
Company type	Categorical	Legal form: Sole proprietorship (reference), LLC, public limited / corporation (inc./corp.), other
Own-harvest share	Categorical	Share of grapes from owned vineyards: 0%–25% (reference), 26%–50%, 51%–75% and 76%–100%
Production volume (ln hL)	Continuous (log)	Natural log of annual wine production (hectoliters)
Breadth: # wine types	Continuous (count)	Number of distinct wine types produced by the winery
Breadth: # grape types	Continuous (count)	Number of grape varieties vinified
Breadth: # labels	Continuous (count)	Number of labels / SKUs released
Organic / biodynamic certified	Binary (0/1)	1 if the winery reports being certified organic and/or biodynamic; 0 otherwise
Consumer-facing diversification intensity	Categorical	None (reference); light (food/events, e.g. local food, music/paint-and-sip and venue rental); heavy (hospitality: restaurant, on-farm lodging and spa/wellness)
B2B producer services	Binary (0/1)	1 If the winery offers producer-oriented services (vineyard or winemaking services, equipment rental, marketing/distribution services); 0 otherwise
Permanent employees (avg)	Continuous	Average number of permanent staff
Temporary employees (avg)	Continuous	Average number of temporary / seasonal staff
Owner / CEO experience (years)	Continuous	Years of wine-industry or managerial experience of the owner/CEO
Region	Categorical	California; pacific northwest (Oregon and Washington) (reference); east / other (all remaining states)

Note(s): All variables are firm-level constructs derived from the survey instrument. Reference categories are indicated in parentheses

- *Years in the market:* This is a continuous measure capturing how long the winery has been operational. Older firms may benefit from accumulated brand equity and established distribution channels, potentially easing entry into premium segments (Capasso *et al.*, 2015; Zhao, 2009).
- *Type of company:* This is a categorical variable distinguishing organizational/legal structures (Public limited company, Sole proprietorship, Limited liability company and Others). Corporate form can influence capital availability and strategic orientation (Dressler and Paunovic, 2021a).
- *Own-harvest share:* This is an ordered category for the percentage of grapes sourced from owned vineyards (0%–25%, 26%–50%, 51%–75% and 76%–100%; boundary values are assigned to the lower band, so the categories are mutually exclusive), distinguishing vertically integrated supply from purchased fruit.
- *Production volume:* This is annual output in hectoliters, entered in natural logarithm to mitigate skew and allow semi-elastic interpretations on the logit scale. Smaller production is often associated with exclusivity, whereas larger output may diminish perceived scarcity (Wang *et al.*, 2024).
- *Portfolio breadth:* This is three counts summarizing offering architecture: number of wine types produced, number of grape varieties vinified and number of labels released.

Greater breadth can widen market appeal but may dilute a focused premium identity (Loken and John, 1993).

- *Organic/Biodynamic certified*: This dummy variable indicates whether the winery reports being certified as organic and/or biodynamic. In line with the literature on eco-labels and organic wine, we treat this variable as a narrow but salient sustainability signal at the winery level, capturing process/quality signals that are increasingly salient in premium segments, rather than as a comprehensive measure of environmental performance.
- *Diversification*: This is to capture heterogeneity in diversification strategies, we collapse the checklist of “other products and services” into two derived measures:
 - *Consumer-facing diversification intensity (three categories)*: none; light complements, comprising food and event formats that plausibly support tasting-room storytelling (e.g. packaged/local food items; venue/private rentals; paint-and-sip, workshops and music nights); and heavy hospitality, comprising on-premise operations that materially reframe the offering (e.g. restaurant, on-farm lodging/hotel and spa/wellness). When both light and heavy are present, the observation is coded heavy.
 - *Producer-service diversification (binary)*: this is the sale of B2B services (e.g. vineyard/winemaking services, equipment rental and marketing/distribution). “Beyond core wine” excludes standard tasting-room service and wine-club shipments. Excessive diversification might shift attention away from wine-centric branding (Castriota, 2020; Depetris Chauvin, 2025; Dressler and Paunovic, 2021a).
- Human capital variables:
 - *Experience of owner/CEO*: These are years of wine-industry or managerial experience, potentially shaping strategic resource allocation for premium positioning (Capasso et al., 2015; Zhao, 2009).
 - *Average number of permanent employees and temporary employees*: This is an indicator of staffing structure. Permanent staff can foster continuity in quality-control protocols (Martínez-Navarro and Sellers-Rubio, 2024).
- *Regional location (three-level indicator)*: We code geography with a parsimonious three-category variable:
 - California;
 - Pacific Northwest (Oregon and Washington); and
 - East/Other (all remaining states); the Pacific Northwest serves as the reference category in the regression tables.

This specification captures the primary US gradient in premium positioning while avoiding over-parameterization from many states with very few observations and from the concentration of upper-tier cases in California, which can induce quasi/perfect separation in binary models. The three-region indicator is included in all specifications; standard errors are clustered by state. In robustness checks using ordered and mixed-effects ordered logits, we additionally include a state random intercept to absorb residual, unobserved state-level heterogeneity. The corresponding results are reported in Table A2 of the Supplementary File. This parsimonious split reflects well-documented differences in brand equity, distribution infrastructure and consumer price expectations – particularly for California’s premier AVAs (Thach and Olsen, 2015) – while preserving adequate within-cell variation.

3.3 Model specifications

Given the binary nature of the dependent variable (upper-tier vs lower/mid-tier), logistic regression was used to estimate the odds that a winery positions itself primarily in the top pricing categories. The general form of the model is as follows:

$$\ln\left(\frac{P(\text{upper} - \text{tier})}{1 - P(\text{upper} - \text{tier})}\right) = \beta_0 + \beta_1(\text{YearsInMarket}) + \beta_2(\text{TypeOfCompany}) + \dots + \beta_k(\text{RegionalLocation}) + \varepsilon_\tau$$

where β_0 is the intercept, β_i are coefficients for each explanatory variable and ε is the error term. Maximum likelihood estimation was conducted in Stata 18, using standard errors clustered by state to address potential heteroskedasticity and within-state error correlation. Categorical predictors (e.g. company type and location) were dummy-coded to capture group-level effects.

Because price positioning is inherently ordinal (Value < Premium < Luxury < Iconic), we complement the binary logit with an ordered logit (cumulative logit) that models shifts in probability mass toward higher tiers. Each winery is assigned to the tier that accounts for the largest share of its production volume; let $Y \in \{\text{Value}, \text{Premium}, \text{Luxury}, \text{Iconic}\}$ denote this ordered outcome. The cumulative-odds form is as follows:

$$\log \frac{\Pr(Y \leq j)}{\Pr(Y > j)} = \tau_j - x'\beta, j = 1, 2,$$

where τ_j are cutpoints, β are coefficients on the same covariate set used in the binary model and a positive β_k indicates a higher likelihood of being in a higher price tier (i.e. lower odds of $Y \leq j$ for every j). Because no winery reports a dominant Value tier (Section 3.2.1), the ordered outcome effectively comprises three categories, so the model estimates two cutpoints ($j = 1, 2$).

3.4 Model diagnostics

Goodness-of-fit was evaluated using the likelihood-ratio chi-square test and the pseudo R^2 , both of which are reported alongside each model. For interpretive clarity, average marginal effects and odds ratios are reported with standard errors, providing insight into how changes in each independent variable (e.g. one additional permanent employee, one more year of owner/CEO experience) affect a winery's odds of premium positioning. Because upper-tier positioning is overwhelmingly concentrated in California and many other states contribute very few observations, including a full set of state dummies in the binary model leads to quasi-separation and unstable estimates. To address this, all robustness specifications use a parsimonious three-region indicator (California; Pacific Northwest—Oregon and Washington; East/Other) and report standard errors clustered by region. We estimate two complementary models on the same covariate set: a binary logit for the upper tier indicator (volume-weighted price-band index $I > 2.5$; Section 3.2.1) and an ordered logit across the four price tiers (Value, Premium, Luxury and Iconic). As an additional robustness check, we re-estimate the ordered logit model with a state random intercept to mitigate sparse state-by-tier cells (mixed-effects ordered logit), allowing for unobserved state-specific heterogeneity. The results, reported in Table A2 of the Supplementary File, are very similar to the standard ordered logit estimates, with the magnitude and direction of the coefficients essentially unchanged.

Because the survey does not directly identify family ownership, we use the reported legal form as a proxy: sole proprietorship, limited liability company, public limited company and other. Legal form is included as a set of indicator variables in all specifications to capture organizational/ownership differences that may correlate with pricing strategy. We note that legal form is not equivalent to family control, and we therefore conduct two robustness recordings reported in Table A3 of the Supplementary File:

- (1) corporate (PLC/Corporation) versus closely held (sole proprietorship + LLC); and
- (2) family-likely (sole proprietorship) versus other.

Results are qualitatively unchanged. We flag the absence of a direct family-ownership measure as a limitation and a priority for future data collection.

We also assessed multicollinearity using variance inflation factors. As reported in Table A4 of the Supplementary File, all variance inflation factor values are modest (maximum ≈ 3.2 and most close to 1), suggesting that multicollinearity is unlikely to pose a serious problem for our estimates.

4. Results

Tables 2 and 3 provide descriptive statistics illustrating key operational, organizational and strategic characteristics of the wineries included in the article. The analytic sample covers 175 wineries across 25 US states. On average, firms have approximately 24.7 years in operation, produce approximately 835 hl annually (median 190 hl), vinify approximately 9 grape varieties, release approximately 14 labels and employ approximately seven permanent and approximately eight temporary workers; owners/CEOs report approximately 24 years of experience on average. The median winery produces four distinct wine types. Diversification beyond wine activities is widespread, though the intensity varies significantly between light events and heavy-hospitality-infrastructure settings.

Sales are overwhelmingly domestic: on average, wineries place about 95% of both volume and value in the USA. Vineyard integration is heterogeneous: roughly 45% source at least three-quarters of their grapes from their own vineyards (the 76%–100% own-harvest band in Table 3), while the remainder rely more heavily on purchased fruit. Firms are small to mid-sized employers, with a mean of approximately seven permanent and approximately eight temporary workers, though dispersion is wide. Management is experienced: owners/CEOs

Table 2. Descriptive statistics of winery characteristics and human-capital variables ($n = 175$)

Variable	Mean	SD	Min.	Max.	Median
Years operating (years)	24.74	18.91	8	170	20
Vineyard surface (ha)	37.66	113.05	0	1,250	8.50
Production volume (hectoliters)	835	2,689	0.75	27,216	190
Number of wine types produced	3.48	1.21	1	6	4
Number of grape varieties vinified	9.37	6.37	1	50	8
Number of wine labels produced	13.98	10.30	1	66	11
B2B producer services (dummy)	0.34	0.48	0.00	1.00	0.00
Organic / biodynamic certified (dummy)	0.16	0.37	0.00	1.00	0.00
Permanent employees (avg)	6.94	10.15	0	75	4
Temporary employees (avg)	7.73	10.14	0	60	5
Owner/CEO experience (years)	23.69	12.58	0	60	20

Note(s): Dummies are reported as proportions (mean) and standard deviations

Table 3. Distribution of wineries by company type, diversification intensity, own-harvest share and region (*n* = 175)

Variable/category	Frequency	%	Cumulative (%)
<i>Company type</i>			
Public limited company (plc)/corporation (inc./corp.)	49	28.0	28.0
Sole proprietorship	19	10.9	38.9
Limited liability company (LLC)	104	59.4	98.3
Other	3	1.7	100.0
<i>Consumer-facing diversification intensity</i>			
None	93	53.1	53.1
Light (food / events)	57	32.6	85.7
Heavy (hospitality)	25	14.3	100.0
<i>B2b producer services (any)</i>			
Yes	60	34.3	34.3
No	115	65.7	100.0
<i>Organic/biodynamic certification</i>			
Yes	28	16.0	16.0
No	147	84.0	100.0
<i>Share of production from own harvest</i>			
0%–25%	74	42.3	42.3
26%–50%	10	5.7	48.0
51%–75%	13	7.4	55.4
76%–100%	78	44.6	100.0
<i>Region</i>			
California	75	42.9	42.9
Pacific Northwest (Oregon, Washington)	29	16.6	59.4
East/other	71	40.6	100.0

have nearly 24 years of industry experience, and workforces are comparatively skilled, with approximately 36% holding university degrees. Organizationally, most wineries operate as LLCs (59%), followed by corporations (PLC/Corp.; 28%) and sole proprietorships (11%). Diversification into hospitality and other non-wine activities is common (69% report at least one activity beyond core wine production), but it is typically peripheral to the core business: nearly two-thirds (64%) derive < 10% of total revenue from these ancillary lines.

To examine the factors associated with premium positioning, we estimate a sequence of nested binary logit models (Table 4), where the dependent variable equals 1 if the volume-weighted price-band index *I* (defined in Section 3.2.1) exceeds 2.5 and 0 otherwise – a condition that, for nearly all wineries, coincides with placing at least half of production volume in the Luxury or Iconic tiers ($\geq \$40$ per 750 ml). Results are reported as average marginal effects, with odds ratios by covariate values summarized in Table A5 of the Supplementary File for completeness. The base specification includes only legal form and years of operation; subsequent models add, in turn, production scale, portfolio breadth, sustainability certification, diversification, human/organizational capital and, finally, the three-region indicator (California, Pacific Northwest and East/Other). Pseudo- R^2 increases monotonically from about 0.04 in the base model to 0.52 in the full specification, and likelihood-ratio tests strongly favor each richer model, indicating that the additional blocks of variables jointly contribute meaningful explanatory power.

Table 4. Nested binary logit estimates for upper-tier list-price positioning (volume-weighted average price band > 2.5; $n = 175$); average marginal effects, with standard errors in parentheses

Variable	Base	+Scale	+Portfolio	+Organic	+Diversification	+Human capital	+Region
<i>Company type (base = sole proprietorship)</i>							
Public limited company (PLC) / corporation (inc./corp.)	-0.009 (0.033)	0.004 (0.038)	-0.024 (0.033)	-0.032 (0.029)	0.007 (0.033)	-0.010 (0.030)	0.052 (0.036)
limited liability company (LLC)	-0.007 (0.038)	-0.0005 (0.039)	-0.017 (0.044)	-0.0003 (0.043)	0.008 (0.049)	0.057 (0.059)	0.073 (0.050)
Other	0.123 (0.095)	0.123 (0.095)	0.035 (0.044)	-0.038 (0.050)	0.028 (0.040)	0.030 (0.049)	-0.032** (0.016)
<i>Own-harvest share (base = 0%-25%)</i>							
26%-50%	0.096 (0.079)	0.100 (0.071)	0.097 (0.070)	0.089 (0.084)	0.067 (0.063)	0.086 (0.082)	0.058 (0.060)
51%-75%	0.123 (0.081)	0.120 (0.084)	0.136 (0.110)	0.137 (0.101)	0.094 (0.095)	0.092 (0.097)	0.119** (0.058)
76%-100%	0.043 (0.037)	0.040 (0.036)	0.048 (0.030)	0.057** (0.029)	0.059** (0.025)	0.038* (0.020)	0.062*** (0.024)
Years operating	0.003*** (0.001)	0.004*** (0.001)	0.003*** (0.001)	0.003 (0.001)	0.002*** (0.0005)	0.002*** (0.0005)	0.001* (0.001)
Log production volume (tL)		-0.011 (0.009)	0.045*** (0.016)	0.042** (0.016)	0.035*** (0.013)	0.010 (0.009)	-0.004 (0.007)
Breadth: # wine types			-0.092* (0.048)	-0.087* (0.047)	-0.068** (0.033)	-0.069* (0.036)	-0.059 (0.049)
Breadth: # labels			-0.0005 (0.003)	0.0001 (0.003)	0.002 (0.003)	-0.002 (0.003)	-0.002 (0.002)
Organic / biodynamic certified			-0.013*** (0.002)	-0.013*** (0.002)	-0.009*** (0.002)	-0.008*** (0.002)	0.000 (0.0004)
<i>Consumer-facing diversification (base = none)</i>							
light (food / events)					-0.162*** (0.062)	-0.151*** (0.056)	-0.119** (0.048)
heavy (hospitality)					-0.151*** (0.076)	-0.131* (0.068)	-0.097** (0.049)
B2B producer services					-0.006 (0.047)	-0.018 (0.038)	0.032 (0.038)
Permanent employees (avg)						0.004*** (0.002)	0.0002 (0.002)
Temporary employees (avg)						-0.001 (0.002)	-0.001 (0.001)
Owner/CEO experience (years)						0.005*** (0.002)	0.004* (0.002)
<i>Region (base = pacific northwest)</i>							
California	0.043	0.044	0.236	0.250	0.294	0.330	0.308*** (0.056)
East/other							-0.222* (0.116)
Pseudo R^2							0.517
Log-likelihood	-86.41	-86.28	-68.96	-67.69	-63.71	-60.44	-43.63
AIC	188.83	190.56	161.92	161.38	159.43	158.88	129.27
BIC	214.15	219.04	199.89	202.52	210.06	219.01	195.73
n	175	175	175	175	175	175	175

Note(s): Standard errors in parentheses, clustered by state (delta method, unconditional). Significance levels: *** $p < 0.01$, ** $p < 0.05$, * $p < 0.10$. Average marginal effects for binary and almost absent in the East/Other group (quasi-separation), the East/Other coefficient is not consistently estimated and its average marginal effect should be interpreted with caution

Across the nested logit models, several robust patterns emerge. First, tenure in the market matters: older wineries are more likely to have the majority of their volume in the Luxury/Iconic tiers, whereas the differences across legal forms are imprecisely estimated in the nested logits. Second, vertical integration in grape supply is consistently associated with premium positioning: relative to wineries sourcing at most one-quarter of their grapes from owned vineyards, those in the 51%–75% and 76%–100% own-harvest categories are markedly more likely to concentrate their output in upper tiers. Third, organic/biodynamic certification enters with a strong, statistically significant positive coefficient once introduced, supporting the idea that certified sustainability serves as a credible premium signal. In contrast, consumer-facing diversification – both light (food/events) and heavy (hospitality) – is negatively associated with upper-tier positioning even after controlling for production scale and portfolio architecture.

Human-capital variables show a nuanced pattern. Years of operation and owner/CEO experience are positively associated with premium positioning, consistent with an interpretation that cumulative know-how, reputation and relational capital facilitate entry into higher price tiers. At the same time, reliance on temporary staff shows a negative but statistically weak association with upper-tier positioning, whereas the number of permanent employees does not display a clear monotonic effect in the logit models. Taken together, the nested models are consistent with the view that premium positioning is less about being “small” *per se* and more about combining vertical integration, credible quality signals and organizational depth with a focused product architecture. To complement the marginal effects reported above, Table 5 presents odds ratios from the full binary logit and ordered logit specifications.

Both models tell a consistent story. Relative to sole proprietorships, LLCs and corporations are more likely to occupy higher price tiers. In the binary logit, the odds that an LLC or a corporation has at least half of its volume in the Luxury/Iconic tiers are about 3.7 and 4.2 times those of a sole proprietorship, respectively (OR = 3.66 and OR = 4.22), although both the odds ratios and the corresponding average marginal effects in Table 4 are imprecisely estimated once standard errors are clustered by state. The ordered logit yields similar patterns for the four-tier outcome: LLCs and corporations are associated with odds ratios of 4.01 ($p < 0.10$) and 1.69, respectively, relative to sole proprietorships. “Other” legal forms also show a positive association in both models. These results are consistent with the idea that more complex organizational forms – likely reflecting higher levels of formalization, governance and access to capital – are systematically linked with premium list-price positioning.

Vertical integration in grape supply is again positively associated with premium positioning. Compared with wineries sourcing at most one quarter of their grapes from their own vineyards (0%–25%), those in the 51%–75% own-harvest category have odds of upper-tier positioning roughly 6.6 times higher in the binary logit (OR = 6.59) and almost twice as high in the ordered logit (OR = 1.78). Wineries sourcing 76%–100% from their own vineyards also show higher odds (logit OR = 2.68 and ologit OR = 1.62), and the intermediate 26%–50% category is likewise positive (logit OR = 3.41 and ologit OR = 1.48). Although these odds ratios carry wide state-clustered standard errors in Table 5, the corresponding average marginal effects in Table 4 are significant at conventional levels for the 51%–75% and 76%–100% categories. The pattern suggests a threshold effect: moderate vertical integration may help, but the association is strongest once own-harvest shares exceed roughly half of total grape input.

Diversification patterns are strongly asymmetric across consumer-facing and producer-oriented activities. Relative to wineries with no consumer-facing diversification, those with light food/events diversification have substantially lower odds of upper-tier positioning

Table 5. Robustness check: binary logit and ordered logit estimates of winery price-tier positioning (full specification; $n = 175$); odds ratios with Delta-method standard errors in parentheses

Variable	Binary logit (odds ratio)	Ordered logit (odds ratio)
<i>Company type (base = sole proprietorship)</i>		
Public limited/corporation	4.22 (4.53)	1.69 (1.54)
Limited liability company (LLC)	3.66 (3.35)	4.01* (3.30)
Other	2.00 (4.21)	8.70 (14.96)
<i>Own-harvest share (base = 0%–25%)</i>		
26%–50%	3.41 (3.91)	1.48 (1.44)
51%–75%	6.59 (7.94)	1.78 (1.57)
76%–100%	2.68 (1.75)	1.62 (0.85)
Years operating	1.01 (0.01)	1.02* (0.01)
Log production volume (hL)	0.96 (0.27)	1.20 (0.24)
Breadth: # wine types	0.48** (0.17)	0.62* (0.17)
Breadth: # grape types	0.98 (0.09)	0.98 (0.07)
Breadth: # labels	1.00 (0.05)	0.97 (0.04)
Organic/biodynamic certified	2.97 (2.22)	6.15*** (3.41)
<i>Consumer-facing diversification (base = none)</i>		
Light (food/events)	0.22* (0.19)	0.37 (0.27)
Heavy (hospitality)	0.23 (0.31)	0.24 (0.23)
B2B producer services	1.48 (0.90)	1.45 (0.74)
Permanent employees (avg)	1.00 (0.04)	0.99 (0.03)
Temporary employees (avg)	0.99 (0.03)	0.99 (0.02)
Owner/CEO experience (years)	1.04* (0.03)	1.03 (0.02)
<i>Region (base = pacific northwest)</i>		
California	28.55*** (32.88)	16.25*** (10.63)
East/other	0.00 (n.c.)	Dropped (quasi-Sep.)
Cut 1 (Premium Luxury)		4.355
Cut 2 (Luxury Iconic)		0.794
Log-likelihood	–43.63	–76.06
AIC	129.27	194.12
BIC	195.73	260.58
n	175	175

Note(s): Cells report odds ratios with delta-method standard errors in parentheses. Significance: *** $p < 0.01$; ** $p < 0.05$; and * $p < 0.10$. The East/Other regional dummy is dropped from the ordered-logit model because too few wineries in this group are positioned in the Iconic tier (quasi-separation); the qualitative pattern of the remaining coefficients is unaffected. Standard errors clustered by state

(logit OR = 0.22, $p < 0.10$; ologit OR = 0.37), and those with heavy hospitality diversification also show reduced odds (logit OR = 0.23; ologit OR = 0.24); in the average-marginal-effect estimates of Table 4, both categories are negative and significant at the 5% level. In contrast, offering producer-oriented B2B services shows a positive, although statistically insignificant, association with premium positioning (logit OR = 1.48; ologit OR = 1.45). Together, these coefficients suggest that tourism-intensive diversification is negatively associated with the highest price tiers, whereas specialized B2B services appear compatible with premium wine strategies.

The human-capital and scale variables display more nuanced patterns. Owner/CEO experience and years of operation are both positively associated with premium positioning in the binary logit (OR = 1.04 per additional year of owner/CEO experience, $p < 0.10$ and OR = 1.01 per additional year in the market), consistent with the idea that accumulated organizational and managerial

know-how, reputation and network capital are more frequently observed among wineries in higher tiers. Years operating also remains positive in the ordered logit (OR = 1.02 and $p < 0.10$), whereas the owner/CEO experience coefficient becomes smaller and statistically weaker (OR = 1.03). The number of permanent employees has no clear association in either model, while the association for temporary employees is negative but small and imprecisely estimated in these specifications (OR = 0.99 in both models); the negative association is statistically significant in the ordered robustness models of Table A3.

Scale, portfolio architecture and certification also show systematic relationships with premium positioning. Production volume shows a positive but statistically insignificant association with higher tiers in the ordered logit (OR = 1.20), while the binary-logit point estimate is close to 1 (OR = 0.96), indicating that larger wineries are also present in higher tiers when other strategic levers are in place. By contrast, portfolio breadth exhibits a clear negative relationship with premium positioning: each additional wine type is associated with lower odds of being in higher tiers (logit OR = 0.48, $p < 0.05$; ologit OR = 0.62, $p < 0.10$), while the associations for the number of grape varieties and labels are much weaker (odds ratios between 0.97 and 1.00). Finally, organic/biodynamic certification is among the strongest correlates of premium positioning. Certified wineries have odds of being in the Luxury/Iconic segment that are about three times higher in the binary logit (OR = 2.97, imprecisely estimated) and more than six times higher in the ordered logit (OR = 6.15 and $p < 0.01$) than non-certified wineries; the corresponding average marginal effect in Table 4 is positive and significant at the 5% level.

Geographic context remains decisive. Relative to the Pacific Northwest (the reference category in Tables 4 and 5), CA wineries show dramatically higher odds of upper-tier positioning: OR = 28.55 in the binary logit and OR = 16.25 in the ordered logit (both $p < 0.01$). The East/Other contrast cannot be estimated reliably, because upper-tier wineries are almost absent outside California and the Pacific Northwest: the East/Other indicator is dropped from the ordered logit and its binary-logit standard error is not consistently estimated (quasi-separation). These large differentials align with the descriptive evidence that California concentrates most Luxury/Iconic production in the sample and are consistent with the importance of regional reputation and cluster effects for premium list-price positioning.

5. Discussion

The purpose of this article was to examine whether upper-tier wine price positioning in the US wine industry is associated only with external regional reputation or also with internal strategic and organizational characteristics that wineries can develop and manage. The findings provide evidence for a more integrated interpretation of premium wine positioning. Rather than being explained by a single factor, positioning in higher list-price segments appears to reflect the combined influence of portfolio focus, diversification choices, organizational capabilities, production-related signals, sustainability certification and regional context. This directly addresses the research gap identified in the literature review by showing that internal managerial choices remain relevant even in an industry where terroir, appellation, reputation and place-based prestige are central to consumer evaluation.

The results support *H1*, which proposed that wineries with more focused product portfolios are more likely to be positioned in upper-tier list-price segments than those with broader, more fragmented portfolios. Across the models, portfolio breadth emerged as one of the clearest indicators of strategic positioning. Wineries offering a larger number of wine types and labels were less likely to be located in the highest price tiers. This suggests that premium positioning is not necessarily associated with offering many products or appealing to multiple consumer segments simultaneously. Instead, wineries in upper-tier segments

appear more likely to curate selective portfolios that reinforce specialization, coherence and perceived expertise.

This finding is consistent with the literature on premium and luxury positioning, which suggests that focus, scarcity, coherence and controlled accessibility contribute to perceived value. In wine markets, a narrower portfolio may allow wineries to concentrate resources on quality control, brand storytelling, vineyard expression and consumer recognition. By contrast, a broad or fragmented portfolio may dilute brand identity and make it more difficult for consumers and intermediaries to associate the winery with a clear premium proposition. Importantly, the findings also suggest that portfolio focus should not be confused with small scale. Production volume was not consistently negative and, in some models, was positively associated with higher-tier positioning. Therefore, the premium signal appears to come less from producing very little and more from organizing the product portfolio in a focused and strategically coherent way.

The results also support *H2*, which proposes that wineries that engage more extensively in consumer-facing diversification, such as hospitality, food, events and tourism-intensive activities, are less likely to be positioned in upper-tier list-price segments. The negative association between hospitality-oriented diversification and higher price tiers suggests that extensive non-wine activities may create strategic tensions for wineries seeking to maintain a premium identity. While wine tourism, events, food service and hospitality can generate additional revenue and strengthen consumer engagement, they may also divert attention from specialized wine production and weaken perceptions of exclusivity or craftsmanship.

This does not mean that all forms of diversification are harmful to premium positioning. Rather, the findings suggest that the type and degree of diversification matter. Consumer-facing diversification may help wineries build visitor traffic and direct-to-consumer relationships, but when these activities become too extensive, they may make the winery appear less specialized as a wine producer. From a resource-based and core-competence perspective, diversification is more likely to support premium positioning when it reinforces the winery's distinctive capabilities rather than dispersing managerial attention and resources across loosely related activities. The positive association observed for producer-oriented or B2B services further reinforces this point. Diversification that remains close to the core wine business may complement premium positioning, while broader hospitality-intensive diversification may create a less coherent strategic identity.

The findings provide broad, although nuanced, support for *H3*, which proposed that wineries with stronger internal capabilities and credible production-related signals are more likely to be positioned in upper-tier list-price segments. Several internal characteristics were positively associated with higher price tiers, including years in operation, owner or CEO experience, higher shares of own-harvest grapes and organic or biodynamic certification. These results suggest that premium positioning is partly rooted in accumulated organizational knowledge, production control and credible signals of quality and authenticity.

Years in operation and owner or CEO experience appear to reflect the value of accumulated human and organizational capital. Older and more experienced wineries may benefit from tacit production knowledge, stronger routines, more developed distribution relationships and greater reputational capital. These resources are difficult for newer wineries to replicate quickly and may help explain why established producers are more frequently positioned in higher price tiers. At the same time, the findings should not be interpreted as suggesting that age alone causes premium positioning. Rather, experience likely matters because it allows wineries to build capabilities, refine their product architecture, strengthen quality consistency and communicate a more credible premium identity over time.

The labor-related findings add further nuance to the role of internal capabilities. The number of permanent employees did not show a strong or simple relationship with premium positioning, but greater reliance on temporary labor was negatively associated with higher-tier outcomes in the ordered models. This suggests that workforce stability may matter more than total headcount. Premium wine production depends on consistency, attention to detail and the coordination of vineyard, cellar, marketing, and customer-facing practices. A more stable labor structure may better support these routines than a workforce heavily reliant on temporary employees. In this sense, organizational capability is not only a matter of size but also of embedded knowledge, continuity and the ability to sustain quality-oriented practices.

Vertical integration also emerged as an important production-related signal. Wineries with higher shares of own-harvest grapes were more likely to be positioned in upper-tier price segments, especially when estate fruit represented a substantial share of grape input. This finding is consistent with the idea that control over grape sourcing allows wineries to better manage vineyard practices, harvest timing, fruit quality and production standards. Estate-based sourcing may also serve as a market-facing signal by linking quality claims to concrete production practices. In premium wine markets, where authenticity, traceability and terroir narratives are central to value creation, own-harvest grapes can reinforce the credibility of upper-tier positioning.

Sustainability certification was also strongly associated with higher price positioning. Wineries with organic or biodynamic certification were more likely to be positioned in Luxury or Iconic tiers. This finding supports the literature suggesting that sustainability labels can operate as credible signals of authenticity, environmental commitment and production care. The result is especially relevant because sustainability claims may not generate premium value unless they are formalized and verifiable. Certification transforms sustainability from a general claim into a recognizable market signal. From a resource-based perspective, certification can also be viewed as an organizational capability, as it requires investments in practices, monitoring, compliance and communication. Therefore, sustainability certification appears to contribute to premium positioning both as an internal production choice and as an external signal of credibility.

The results also support *H4*, which proposed that wineries located in established fine-wine regions are more likely to be positioned in upper-tier list-price segments than wineries located in emerging or less recognized regions. The models with geographic controls show that, relative to California, wineries in other regions were less likely to appear in the highest price tiers. This finding reinforces the continuing importance of place-based reputation in wine markets. Established regions benefit from collective reputation, accumulated prestige, specialized suppliers, distribution networks, tourism infrastructure and consumer familiarity. These regional advantages can strengthen the credibility of premium price positioning beyond the attributes of any individual winery.

At the same time, the regional findings should be interpreted carefully. The results do not imply that wineries outside California or other established fine-wine regions cannot achieve premium positioning. Rather, they indicate that regional reputation continues to shape the probability of appearing in upper-tier price segments, even after accounting for internal strategic and organizational variables. This is precisely the question at the heart of the research gap identified in Section 2.6: whether upper-tier positioning is mainly a function of regional prestige or also of internal strategic and organizational characteristics. The evidence points to both: premium positioning is not explained solely by regional prestige, but regional prestige still matters. Internal capabilities and strategic choices can support premium positioning, yet they operate within a broader market context in which some regions offer stronger reputational platforms than others.

Taken together, the findings show that upper-tier wine price positioning reflects both managerial agency and regional embeddedness. Wineries can influence their premium positioning through choices related to portfolio focus, diversification, vertical integration, human capital, labor structure and sustainability certification. However, these internal choices are not made in isolation. They interact with external signals, especially regional reputation, that shape how consumers, intermediaries and the broader market interpret quality and value. This integrated interpretation contributes to the literature by moving beyond single-factor explanations of premium wine pricing and by showing how internal strategic characteristics and external place-based reputation jointly structure upper-tier positioning.

The findings also have practical implications for winery managers. For wineries seeking to move into or sustain upper-tier price segments, the results suggest the importance of maintaining a coherent and focused product portfolio, avoiding excessive diversification that may dilute wine-centered identity, investing in accumulated organizational capabilities, strengthening control over grape sourcing and using credible certifications to support sustainability claims. For wineries in emerging regions, the challenge may be greater because they cannot rely on the same level of collective regional prestige as California or other established fine-wine areas. However, this also highlights the importance of building firm-level credibility through quality signals, focused strategy and differentiated production practices.

Finally, the results should be interpreted as exploratory rather than causal. The article relies on cross-sectional data and self-reported list-price tiers, and the sample size limits the extent to which the findings can be generalized mechanically to the entire US wine industry. Nevertheless, the patterns are theoretically coherent and align with the article's central argument: premium wine positioning is shaped by a combination of internal strategic choices, organizational capabilities, credible production-related signals and regional reputation. This supports the need for integrated empirical models that simultaneously examine multiple firm-level and place-based factors to explain upper-tier wine price positioning.

5.1 *Implications for theory and practice*

These findings carry several implications for both the scholarly understanding of wine business strategy and the managerial practice of winery management, albeit within the limits of our cross-sectional, non-representative sample. Conceptually, the article helps bridge wine business and economics with strategic management theory by showing that classic principles – focus versus diversification, the resource-based view of the firm and the role of clusters and location – are relevant for explaining competitive positioning within the wine industry. Prior research has often centered on consumer preferences, pricing or viticultural factors; our work shifts the lens to firm-level strategic factors and documents how they are associated with premium list-price positioning, without claiming full generalizability.

The negative association between tourism-intensive diversification and premium positioning gives context-specific support to the long-standing argument that sticking to core competencies tends to yield better performance than pursuing unrelated diversification (Prahalad and Hamel, 2006). The positive associations with experience, organizational tenure and signals such as estate sourcing and organic/biodynamic certification underscore the applicability of the resource-based view in agribusiness settings (Barney, 1991): intangible resources, accumulated human capital and credible process signals are more prevalent among premium-positioned wineries. Our evidence, thus, refines resource-based theory by highlighting which specific capabilities – organizational experience, stable human capital, vertical integration and sustainability certification – are more likely to be present in contexts where upper-tier positioning is reported. The strong location effect reinforces the need to integrate these firm-level perspectives with cluster and regional theories (Porter,

1998), suggesting that models of winery performance should account for geographic endowments and collective reputation when analyzing strategic outcomes.

From a managerial perspective, the results offer cautious but concrete guidance. First, focus and coherence in the wine portfolio seem important: managers in our sample who run broad, fragmented line-ups or rely heavily on hospitality activities are less often found in the highest price tiers. This does not imply that all diversification is harmful, but it suggests that non-wine ventures should be closely aligned with and clearly supportive of the core wine brand. Second, the patterns for experience and staffing highlight the value of investing in people and capabilities. Building and retaining a stable, skilled core team and accumulating managerial and organizational experience are long-term processes, yet they appear to be characteristic of wineries that report premium positioning. This has implications for hiring, training and succession planning in family wineries. Third, strong associations with own-harvest shares and organic/biodynamic certification indicate that vertical integration and credible sustainability signals may be effective elements of a premium strategy. For wineries that already operate at high-quality levels, strengthening estate sourcing and pursuing robust certification schemes can be viewed as investments in differentiation rather than mere compliance costs.

Finally, the pronounced location effects remind managers and policymakers that regional context continues to matter: wineries outside established clusters may need to work harder on the internal levers identified here – portfolio focus, capability building, vertical integration and sustainability signaling – to compensate for the absence of a strong regional halo. Given the article's limitations, these implications should be treated as strategic orientations rather than prescriptive rules, yet they offer a coherent set of priorities for wineries aiming to compete in higher-priced segments.

Beyond firm-level strategy, the results also have implications for regional wine development policy. The pronounced regional differences we document suggest that emerging or less reputed regions cannot rely solely on individual wineries to build a premium image. Policymakers in these areas may want to complement generic promotion with more targeted measures that support the internal levers associated with premium positioning in our models: facilitating access to land and finance for estate-based viticulture and vertical integration; lowering transaction costs for credible sustainability schemes (e.g. organic certification); investing in skills-oriented extension services and vocational training to deepen local human capital; and developing shared tourism and digital marketing platforms that help focused, quality-oriented wineries reach broader audiences. These regional levers are consistent with cluster-based perspectives on external economies and collective reputation in wine regions (Porter, 1998; Frick and Simmons, 2013; Taylor and Barber, 2008). While our cross-sectional data do not allow for causal claims about the effectiveness of such interventions, they point to a coherent set of regional priorities – capability building, credible quality signaling and coordinated branding – that could help less established regions gradually strengthen their position in higher-value segments.

6. Conclusions, limitations and future research

While this article provides valuable insights, it is not without limitations. First, the analysis is based on a cross-sectional data set of wineries (175 observations), which limits our ability to make strong causal inferences. We identified associations between certain factors and premium positioning, but we cannot conclusively determine the direction of causality. For example, we observe that wineries with higher shares of own-harvest grapes and organic/biodynamic certification are more frequently positioned in upper price tiers, but we cannot tell whether these strategic choices led to premium positioning or were adopted after a

winery had already moved into higher segments. The relationship is likely mutual. Future research could address this by using longitudinal designs, tracking wineries over time, as they implement strategic changes and possibly move into or out of the premium segment. A longitudinal approach would help untangle cause and effect and observe the dynamic evolution of strategy and market position (e.g. how changes in product focus or leadership influence outcomes over several years). It would also allow researchers to capture long-term processes like brand building and reputation development, which are highly relevant in the wine industry.

Second, although our sample and model focus primarily on wineries in certain regions (with a substantial subset from California) and are not statistically representative of all US wineries, this raises questions about generalizability across different regional and national contexts. The California effect we observed suggests that region-specific factors play a big role; hence, cross-country or cross-region comparative studies are a logical next step. Future research should test whether the determinants of premium positioning identified here hold true in other renowned wine regions (e.g. Burgundy, Tuscany and Marlborough) and in emerging wine countries. It is possible that in Old World regions with strong appellation systems, factors such as centuries of heritage or appellation status could outweigh internal strategic factors. Conversely, in New World regions without an established reputation, internal capabilities might be even more crucial. Comparative studies could explore these nuances – for instance, are the associations of specialization versus diversification universal or do they vary by market maturity? Conducting international comparative research would enrich the findings, test their robustness and uncover context-specific drivers. It would also help wineries benchmark themselves against global practices, as the wine market is increasingly global in scope. Relatedly, despite our use of a parsimonious regional control (California/Pacific Northwest/East–Other), state-clustered standard errors and alternative specifications (including ordered logit models and additional robustness checks reported in Tables A1–A3 of the Supplementary File), residual spatial confounding may persist; for example, variables such as years’ operating or certification could still partly reflect unobserved regional factors.

Third, our dependent variable is a list-price-based positioning construct rather than a measure of realized market prices or revenue mix. Specifically, wineries self-reported the share of volume allocated to four list-price tiers (Value, Premium, Luxury and Iconic), our binary outcome identifies wineries whose volume-weighted price-band index exceeds the Premium/Luxury midpoint – which, for nearly all wineries, coincides with a majority of volume positioned at $\geq \$40$. This captures posted price positioning (“ask prices”), not transaction prices or quantities sold at those prices. As such, the results speak to associations with list-price positioning, not to a winery’s ability to “move upmarket,” actual price realization or revenue outcomes and may be affected by discounts, promotions or channel mix that separate posted and realized prices.

Fourth, the sample is not fully representative of all US wineries and is likely to skew toward medium- to large-sized producers; non-response and self-selection may bias estimates. Although we document the sample profile, compare it to the underlying sampling frame where possible, and caution against overgeneralization, selection on unobservables cannot be ruled out. Robustness checks (e.g. alternative price thresholds, ordered logit models, geography controls and ownership proxies) mitigate but do not eliminate these concerns.

Another limitation is the scope of variables included in our model. We focused on a set of tangible and human-capital factors, but other potentially important factors for premium positioning were not fully captured. On the sustainability side, we include a dummy for organic/biodynamic certification, which is a narrow but salient signal, but we do not observe

broader sustainability orientation or ESG-related practices (e.g. carbon-neutral initiatives, regenerative viticulture or wider corporate social responsibility programs). Future research should examine how a broader range of sustainable viticulture practices and corporate social responsibility initiatives affect a winery's premium image. This is especially pertinent as wine consumers (and import markets) are increasingly emphasizing eco-friendly production; being a leader in sustainability might bolster a winery's reputation and pricing power. Another increasingly relevant domain is digital marketing and online presence. We did not examine the role of wineries' digital strategies – such as social media engagement, direct-to-consumer online sales or influencer partnerships – even though these have emerged as critical tools for building brand awareness and loyalty in the past decade.

Our measure of “premium positioning” might overlook gradations and the multi-faceted nature of what “premium” means. Future research might adopt a more granular or continuous measure of premium status, for example, using average bottle price or expert quality ratings as dependent variables in an ordered or linear model. Such approaches could validate our findings using alternative definitions of premium performance. Additionally, qualitative research could complement our quantitative approach by exploring how and why these factors (focus, human capital, etc.) make a difference in practice. Interviews with winery owners who successfully “went premium” could shed light on the strategic decisions and challenges of that journey, potentially revealing mediating factors (such as innovation in winemaking or branding campaigns) beyond the scope of our article.

In conclusion, this article provides a focused analysis of factors associated with premium positioning in the wine industry, using self-reported list-price tiers as the outcome variable. Wineries that remain focused on their core wine production, avoid undue tourism-intensive diversification and cultivate strong human and organizational capabilities are more frequently found at the premium end of the market in our sample. Associations with vertical integration in grape supply and organic/biodynamic certification further suggest that estate sourcing and credible sustainability signals are characteristic of wineries that report operating in higher price tiers. These findings align with and refine prior studies in wine economics and strategic management, offering both theoretical contributions and practical guidance, while remaining subject to the data and design limitations discussed above. As the wine industry evolves, with trends like sustainability, digitalization and globalization accelerating, future research building on this work should examine how these emerging factors intersect with the established correlates of premium positioning identified here. A combination of longitudinal and comparative studies would be especially valuable to capture the changing landscape. For practitioners, our results stress that achieving a premium positioning is a multifaceted endeavor: it involves strategic focus, continuous capability-building and, often, engagement with markets beyond the immediate local context. Given the constraints of our data, these implications should be interpreted as indicative patterns rather than prescriptive rules, but they nonetheless provide a coherent starting point for both managerial reflection and further scholarly inquiry.

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Supplementary material

The supplementary material for this article can be found online.

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