Quest Journal of Management and Social Sciences
Volume 8 Issue 1: 186-202
ISSN Print: 2705-4527
ISSN Online: 2705-4535
Web: https://www.quest.edu.np

Assessing the Prospects of the Wine Industry in Kathmandu Valley: An Exploratory Study

Suman Mainali[1] *& Niruta Subedi*[1*]

[1]Quest International College, Pokhara University, Gwarko, Lalitpur, Nepal
[*]Corresponding Email: subediniruu@gmail.com

Received: 17 January 2026
Revised: 27 February 2026
Accepted: 15 March 2026
Published: 30 March 2026

How to cite this paper:
Mainali, S., & Subedi, N. (2026). Assessing the Prospects of the Wine Industry in Kathmandu Valley: An Exploratory Study. *Quest Journal of Management and Social Sciences, 8(1),* 186-202. https://doi.org/10.3126/qjmss.v8i1.91925

Abstract

Background: The wine industry in Nepal has been gradually expanding, particularly in urban areas such as Kathmandu Valley. Understanding public awareness and perceptions toward wine businesses is important for the growth and promotion of the beverage industry in Nepal.

Purpose: This research work was carried out to access the prospects of Wine business in Kathmandu Valley. To promote and enhance the beverage industries in Nepal it is very important to find out the possible challenges and outcome. The major objective of this study was to find out the general understanding of wine business in Kathmandu valley.

Design/methodology /approach: The exploratory research design was adopted, and data was collected using structured questionnaires. Both descriptive and inferential analyses were used where STATA was used for inferential analysis. Kathmandu valley residents were taken as a population, and 403 individuals were taken as a sample. The study has used the non-probability sampling technique. The base theory of the research is

Findings: The study conducted shows that majority of the respondents are aware and have knowledge about Wine Business in Kathmandu Valley. People tend to know about wine and its benefits and makings. Result of STATA method shows that 11 variables used in the study are significant.

Conclusion: The goal of the study was to know the awareness of people in wine business in Kathmandu Valley, as well as to provide insight into various perspectives and variables. The primary goal of the study is the factors determining the wine business in Kathmandu valley. Based on conclusion this study recommended increased awareness level of people residing in Kathmandu there are various things that should be carried out by the government and the companies that manufacture wine.

Keywords: Wine Business, Alcohol, Beverage, Kathmandu Valley, Awareness Index

1. Introduction

The global wine industry represents one of the oldest and most culturally embedded agro-based industries, combining agricultural production, manufacturing, trade, and experiential consumption (Gilinsky et al., 2016; Golicic, 2022). Wine, produced primarily through the alcoholic fermentation of grapes, contains phenolic compounds that have been associated with potential health benefits when consumed moderately (Duan et al., 2019). Beyond its biochemical properties, wine has evolved into a symbol of lifestyle, sophistication, and socialization across societies. According to the International Organisation of Vine and Wine (2021), global wine production reached approximately 258 million hectoliters in 2020, highlighting its substantial economic footprint. Historically dominated by Old World producers such as France, Italy, and Spain, the industry has experienced structural transformation since the late twentieth century, with New World countries significantly expanding their market share (Allen, 2011; Dunning, 2013). These shifts reflect broader globalization processes, technological innovation in viticulture, and changing consumer preferences. As a result, the wine industry today is characterized by dynamic competition, regulatory oversight, sustainability concerns, and increasing emphasis on premiumization and experiential value creation.

Contemporary developments in the wine sector reveal several transformative trends. Consumers are increasingly demanding premium, high-quality, and sustainably produced wines, leading to the growth of boutique wineries, organic viticulture, and biodynamic farming practices (IBISWorld, 2021). Simultaneously, technological integration, from precision agriculture and vineyard monitoring systems to digital marketing platforms and e-commerce, has redefined production efficiency and distribution channels (Matese & Filippo, 2016). The industry is also closely linked to environmental sustainability, as wineries generate substantial organic residues that can be repurposed within circular bioeconomy frameworks (Ncube et al., 2021; Golicic, 2022). Despite its resilience over centuries, the sector faces mounting challenges, including climate change, regulatory complexities, and evolving consumption patterns (Gregg et al., 2020; Zabaniotou et al., 2018). Rising temperatures and unpredictable weather conditions threaten grape yield and quality, while stricter environmental regulations require adaptation in production methods. Furthermore, sustainability considerations are not always fully recognized in practice (Gregg et al., 2020; Rodrigues et al., 2022), indicating a gap between policy discourse and operational implementation. These global dynamics provide an important contextual foundation for examining emerging wine markets in developing economies.

In the context of Nepal, particularly in Kathmandu Valley, the wine business has shown gradual yet notable growth. The increasing number of wine bars, specialty shops, and hospitality establishments suggests a shifting consumption culture influenced by urbanization, tourism, and lifestyle transformation (Shrestha, 2022). Wine consumption is often associated with socialization, celebrations, and perceived health benefits, while purchase decisions are shaped by factors such as price, taste, brand image, place of purchase, and lifestyle orientation (Maharjan et al., 2022). However, the Nepali wine industry operates within a challenging regulatory and fiscal environment. High excise duties and taxation policies contribute to elevated retail prices, potentially constraining consumer demand and limiting market expansion (Nepal, 2024; Karmacharya et al., 2024). Moreover, limited governmental support for beverage industries in developing economies further restricts structural development and competitiveness. While global experience economy theory (Maharjan et al., 2022; Parajuli et al., 2025) emphasizes the creation of memorable consumer experiences as a driver of value, empirical understanding of how such experiential dimensions apply to Nepal's wine market remains limited. This gap underscores the necessity of systematic academic inquiry into the prospects of the wine business within Kathmandu Valley.

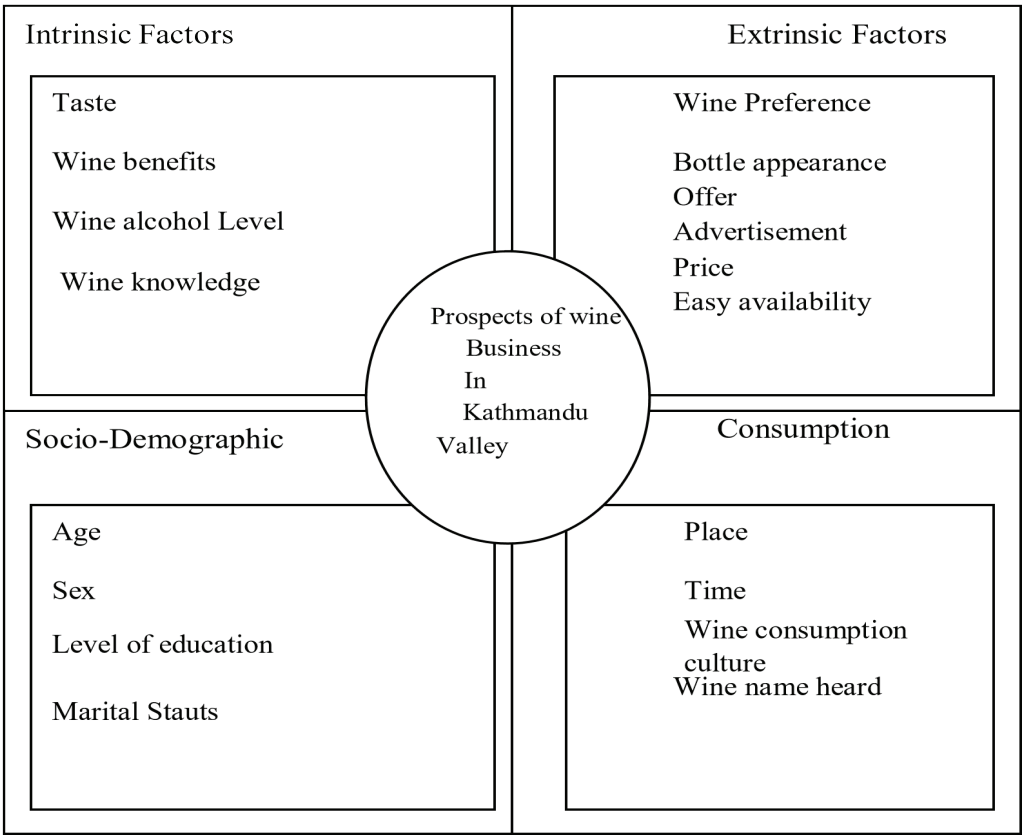
Against this backdrop, the present study aims to examine the prospects of the wine business in Kathmandu Valley by integrating global industry insights with local market realities. Specifically, the research seeks to identify consumer preferences regarding wine consumption, analyze the factors determining the business prospects of wine enterprises, assess the general level of consumer understanding of wine, and

evaluate implications for effective promotion strategies. By focusing on both consumer behavior and seller perspectives, the study contributes to a more comprehensive understanding of market viability in an emerging economy. It also responds to broader industry challenges, such as sustainability, regulatory pressures, and shifting consumption trends, by contextualizing them within Nepal's socio-economic environment. Through this analysis, the research intends to provide evidence-based insights for entrepreneurs, policymakers, and hospitality stakeholders seeking to strengthen the strategic positioning and long-term sustainability of the wine industry in Kathmandu Valley.

2. Theoretical Framework and Hypothesis

A theoretical framework provides the conceptual foundation that explains the relationships among variables and guides the interpretation of research findings (Verpio et al., 2020). For this study, several relevant theories have been reviewed to understand the prospects of the wine business in Kathmandu Valley. The Consumer Behavior Model explains how individual, psychological, social, and cultural factors influence purchasing decisions (Leonov et al., 2023). The Consumption Value Theory posits that consumer choice is driven by functional, social, emotional, epistemic, and conditional values (Tanrikulu, 2020). The Theory of Resource Dependency suggests that firms depend on external resources and must manage relationships and environmental constraints to sustain operations (Jiang et al., 2023). The Business Innovation Model emphasizes how firms create competitive advantage through innovation in products, processes, and marketing strategies (Wirtz et al., 2016). The Contingent Valuation Model (CVM) is an economic approach used to estimate consumers' willingness to pay (WTP) for a product or service based on hypothetical market scenarios (Smith, 2006).

Figure 1: Modified Conceptual Framework



Source: Modified from Maharjan et al. (2022)

Among these, the Contingent Valuation Model (CVM) is adopted as the guiding theory for this study. This research examines the prospects of the wine business in Kathmandu Valley by assessing consumer preferences, general understanding of wine, determinants of demand, and promotional implications. The main constructs of the study include consumer awareness, perceived value, price sensitivity, lifestyle factors, and willingness to pay (Smith, 2006; Carson, 2011). The working mechanism of CVM involves presenting respondents with a hypothetical market scenario and eliciting their maximum willingness to pay for wine products, thereby estimating perceived economic value and market potential (Carson, 2011). The rationale for adopting CVM lies in its suitability for emerging markets where actual market data may be limited but consumer perception and valuation significantly determine business viability. Thus, the theoretical framework establishes that consumer awareness, perceived value, and socio-economic factors influence willingness to pay, which in turn determines the prospects of the wine business, as illustrated in Figure 1.

Ordered Logit Model

Ordered logit model was used to measure wine awareness level in finding out the prospects of wine business in Kathmandu Valley. In ordered logit outcome response has some order and is coded 0, 1 and 2 indicating the Wine awareness. Suppose the likelihood of being in awareness level was described by ordered logit model as:

Pr(Y = C/Xi) = F (Xiβ)

Where, Y is the response generated as outcome for awareness Level of people that is coded as 0 = less aware, 1= Moderate aware and 2 = High aware; F is the standard logistic cumulative function; X is the set of independent variables.

$$P\,Yi\ >\ j\ = \frac{exp\ (x_i\ \beta\ -k_j\ )}{1+[exp\ (x_i\ \beta\ -k_j)]}\ ,\ \ \text{j = 1, 2… M-1, which implies}$$

$$P(Y_i = j) = \frac{exp\ (x_i\ \beta\ -k_{j-1}\ )}{1+[exp\ (x_i\ \beta\ -k_{j-1})]}$$

$$P(Y_i = 1) = 1 - \frac{exp\ (x_i\ \beta\ -k_j\ )}{1+[exp\ (x_i\ \beta\ -k_j)]},\ \ \text{j=2,…..M-1, implying}$$

$$P(Y_i = M) = \frac{exp\ (x_i\ \beta\ -k_{m-1}\ )}{1+[exp\ (x_i\ \beta\ -k_{m-1})]}$$

In the case of M=2, these equations simplify to:

$$P(Y = 0) = \frac{1}{1+[exp\ (Z_i - k_i)]}$$

$$P(Y = 1) = \frac{1}{1+[exp\ (Z_i - k_2)]} - \frac{1}{1+[exp\ (Z_i - k_1)]}$$

Hence, Williams (2016) stated that utilizing the estimation of Z and the assumed logistic distribution of the aggravation term, the ordered logit model can be utilized to assess the likelihood that the unobserved variable Y* falls inside the different edge limits. For our situation, it is to measure community's attitude to promote cultural tourism development. The empirical specification can be seen as below:

$$Y = \alpha_o + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \cdots \ldots \ldots + \beta_n X_n + \varepsilon$$

Further it can be presented as:

$Y = \alpha_0 + \beta_1$age + $\beta_2$sex + $\beta_3$level of education+ $\beta_4$marital status + $\beta_5$place + $\beta_6$time+ $\beta_7$wine consumption culture + $\beta_8$wine brand heard + $\beta_9$wine preference + β_{10}bottle appearance + β_{11}offer + β_{12}advertisement + β_{13}price + β_{14}easy available+ β_{15}Taste+ β_{16}wine benefits+ β_{17}wine alcohol level+ β_{18}wine knowledge

Where, Y= Awareness level towards wine business (i=0, 1, 2) X= Independent Variables ε = Error Terms

Table 1: Variable Definition Table

Indicator	Explanation	Expected Sign	Description
Extrinsic Factor			
Age	Years	+ -	Age of Customers
Gender	1=Male 0=Otherwise	+ -	Gender of Customers
Education	1=formal 0=Otherwise	+ -	Years of Formal Education
Income	1=Yes 0=Otherwise	+ -	Income of Customers
Marital Status	1=Yes 0=Otherwise	+ -	Marital Status of the Customers
Consumption			
Education	1=formal 0=Otherwise	+ -	Years of Formal Education
Income	1=Yes 0=Otherwise	+ -	Income of Customers
Marital Status	1=Yes 0=Otherwise	+ -	Marital Status of the Customers
Offer	1=Yes 0=Otherwise	Yes/No	Offer that affects the consumption of wine
Price	1=Yes 0=Otherwise	Yes/No	Price factors that affect the Consumption of the wine
Suggestions	1=Yes 0=Otherwise	Yes/No	
Advertisement	1=Yes 0=Otherwise	Yes/No	Marketing that influences the consumption of wine
Brand name	1=Yes 0=Otherwise	Yes/No	Brand name that affects the consumption of wine
Easy Availability	1=Yes 0=Otherwise	Yes/No	Easy availability that affects the consumption of wine
Intrinsic Factor Taste	1=Yes 0=Otherwise	Yes/No	Taste that affects the consumption of wine
Wine Benefits	1=Yes 0=Otherwise	Yes/No	Wine benefit that the consumer is aware of
Wine Alcohol Level	1=Yes 0=Otherwise	Yes/No	Wine alcohol level that the consumer is aware of
Wine Knowledge	1=Yes 0=Otherwise	Yes/No	Wine knowledge that the consumer is known about
Consumption Place	1=Yes 0=Otherwise	Yes/No	Consumption Place that the consumer is seeking for
Time	1=Yes 0=Otherwise	Yes/No	Time factor that affects the consumption of wine

Purchase	1=Yes 0=Otherwise	Yes/No	Purchasing ablity that the consumer is willing to
Alcohol Consumption	1=Yes 0=Otherwise	Yes/No	Alcohol consumption factors that affect the consumption of wine
Wine Consumption	1=Yes 0=Otherwise	Yes/No	Wine Consumption factors that affect the consumption of wine
Wine Name Heard	1=Yes 0=Otherwise	Yes/No	Wine name factor that affects the consumption of wine
Wine Consumption with Family	1=Yes 0=Otherwise	Yes/No	Wine Consumption with family factors that affect the consumption of wine
Wine Consumption culture Culture	1=Yes 0=Otherwise	Yes/No	Wine Consumption culture factor that affects the consumption of wine

3. Research Methods

Study Area and Population

The study area for the study is chosen as Kathmandu Valley which consists of Kathmandu, Lalitpur and Bhaktapur which is in Province 3 known as Bagmati Province of Nepal (Shrestha, 2022; Lawaju et al., 2023). Being the capital city of Nepal and one of the only regions which accumulates highest concentration of populations, conducting research on wine prospects among the Kathmandu valley gives better and more factual result. Additionally, being the capital city of Nepal and one of the only regions which accumulates highest concentration of population, conducting research on Kathmandu about wine awareness level to figure out wine prospects in Kathmandu Valley. Kathmandu accounts for 1/12 population and has a population of 985000 in 2019 and taking the Kathmandu as study area can reduce the error in our study due to the inclusion of sample from diverse ethnicity, age gender and different class of people. The study has the target customers in Kathmandu valley where huge portion of the population resides and carry knowledge about wine.

Sampling Technique and Sample Size

Sampling is a subset of the population to make statistical inferences and estimate population characteristics (Parajuli et al., 2021; Bhatta et al., 2023). Among the several techniques of non-probability sampling, convenient sampling methods have been selected for study analysis. Convenient sampling is used as it is one of the appropriate techniques for analysis and data presentation (Devkota & Mahapatra, 2025). Hence, convenience sampling has been used for this research survey to measure awareness promotion and contribution of Wine Industry sectors in Kathmandu Valley. Besides, the sample size was determined using the formula $n = z^2pq/e^2$ (Parajuli et al., 2021; Singh et al., 2024). At a 5% significance level, z = 1.96, with p = 0.5 (assumed prevalence of wine awareness), q = 0.5, and allowable error e = 0.05. The calculated sample was 384.16. Adding 5% non-response error (19.20), the final sample size was approximately 403 respondents from Kathmandu Valley.

Research Instrument, Data Collection and Analysis

A structured questionnaire administered through face-to-face interviews was the primary research instrument for this study. The questionnaire was carefully designed, using KOBO toolbox, to address the study objectives related to consumer preference, awareness, and determinants of wine business prospects in Kathmandu Valley. A pilot test was conducted with 15 respondents to ensure clarity, reliability, and

validity. After necessary revisions, the final questionnaire was uploaded to Kobo Toolbox for systematic data collection. Data were collected from respondents residing in Kathmandu, Bhaktapur, and Lalitpur through both online and offline modes, with the majority gathered via direct interviews. The survey was conducted between January 25 and February 26, 2023.

For data analysis, collected responses were first cleaned and tabulated in Microsoft Excel and then analyzed using STATA software. Descriptive analysis was applied to summarize socio-demographic characteristics and key determinants of wine consumption. An awareness index was developed using 16 dichotomous (Yes/No) questions to categorize respondents into low, moderate, and high awareness levels based on percentage scores. Furthermore, inferential analysis was performed using an ordered logistic regression model, appropriate for the ordered dependent variable (wine preference).

4. Results

Socio-demographic Analysis

Table 2: Socio-Demographic Interpretation

Variables	Category	Number	Percentage
Gender	Male Female Others	312 90 1	77.42% 22.33% 0.25%
Marital Status	Married Single Divorce	316 86 1	78.41% 21.34% 0.25%
Location	Kathmandu Lalitpur Bhaktapur	147 138 118	36.48% 34.24% 29.28%
Education Level	School Level Intermediate Bachelors Masters	13 161 192 37	3.23% 39.95% 47.64% 9.18%
Frequency Frequency of Alcohol Consumption	Very less frequently Less frequently Neutral Frequently Very frequently	163 155 65 15 5	40.45% 38.46% 16.13% 3.72% 1.24%

The Socio-Demographic characteristics of the sample that was surveyed are included in this section. Data collected from entire 403 individuals within Kathmandu valley. The socio-demographic section deals with the analysis of various socio demographic characteristics of respondents like sex, age, marital status, occupation and education and its relationship with the alcohol consumption. The analysis has been conducted under 5 headings i.e., sex of the respondent, occupation of the respondent, age and marital status of the respondent and frequency of alcohol consumption. The first category deals with the relationship between gender differences in alcohol consumption. This category intends to study and analyze the wine consumption made by the respondents and their gender differences in consuming wine. The study has been conducted among 403 residents in Kathmandu valley where are male (77.42 %) and are female respondents (22.33%). This study shows the gender differences in alcohol consumption because the proportion of male consumer is higher compared to female. The reason behind the male proportion being higher wine consumers can be the male dominated society in Nepal.

This second heading deals with the respondent's marital status. This category aims to study the wine consumption of respondents keeping marital status as independent factor. For making the study more valid the married population is 316 (78.41%) and the unmarried population is 86 (21.34%) whereas, divorce respondent is 1 (0.25%). The study also shows that marriage is the factor that positively affects the wine consumption in Kathmandu valley. The third heading deals with the education level of the respondents. The study shows that the people in which the maximum respondent are bachelors passed whereas the minimum respondent has studied school level education. In this study 403 individuals who consume wine were polled to know their general understanding of wine. In this category the variation in frequency of alcohol consumption on the basis of gender differences. Wine consumption is a popular social activity around the world, but the frequency of wine consumption varies by region, culture, and personal preferences. This study aims to explore the frequency of wine consumption in different populations and identify factors that influence wine consumption habits. During the survey, respondents who consume alcohol daily is categorized as very frequently, twice a week as frequently, once a month as less frequently and twice a week as frequently and respondents who consume alcohol occasionally are considered as very less frequently.

Consumers Preference for Wine among the People in Kathmandu Valley

For describing the respondent's most preferred alcoholic beverage, there are multiple option on wine, brandy, gin, vodka and other alcoholic beverages. Out of the total 403 respondents, 395 respondents mostly preferred wine (Figure 2). Whereas 242 respondents prefer whisky. Vodka is preferred by 187 respondents, brandy is preferred by 186 respondents, 173 respondents prefer rum. Similarly, scotch and gin are preferred by 171 and 152 respondents respectively. Whereas 102 respondents prefer drinks other than this. While checking the preference of wine consumption in Kathmandu valley we checked the consumer preference on the brand. Which brand is most preferred and which brand is least preferred by the consumers. The result is given below in the table where big master is the most preferred wine with 207 mostly preferred brand and grapple is the least preferred brand with 87 respondents (Table 3).

Table 3: Wine Brand Preference Interpretation

Dadaghare	Bigmaster	Hinwa	Patale Ban	Canvas	Kings hill	Divine	Grapple
111	207	171	149	134	141	132	83

General Understanding about Prospects of Wine Business in Kathmandu Valley

In this study 403 individuals who consume wine were polled to know their general understanding of wine. In this category the variation in frequency of alcohol consumption based on gender differences. Wine consumption is a popular social activity around the world, but the frequency of wine consumption varies by region, culture, and personal preferences. This study aims to explore the frequency of wine consumption in different populations and identify factors that influence wine consumption habits. During the survey, respondents who consume alcohol daily is categorized as very frequently, twice a week as frequently, once a month as less frequently and twice a week as frequently and respondents who consume alcohol occasionally is considered as very less frequently. Table 4 shows the understanding of wine among the consumers in Kathmandu valley.

Table 4: General Understanding Interpretation Table

Particulars	Yes		No	
	Number	Percentage	Number	Percentage
Wine is a premium Product	292	72.46	111	27.54
Are you familiar with the content of wine	270	67	133	33
Foreign wine is better than domestic wine	285	70.72	118	29.28

Have you been referred to wine purchase at the time of alcohol selection?	216	53.6	187	46.4
Do they prefer the same brand during alcohol selection?	353	87.59	50	12.41
Do your parents consume wine?	264	65.51	139	34.49
Do you consume wine with family members?	329	81.64	74	18.36
Is there culture of wine consumption at any celebration?	352	87.34	51	12.66
Wine market is good in Nepal.	334	82.88	69	17.12
Have you seen scope of wine in Nepal?	382	94.79	21	5.21
Can wine make their own market compared to alcoholic beverage?	277	68.73	126	31.27
Can government provide better environment to promote wine?	395	98.01	8	1.99

Talking about the familiar terms used in wine like grape wine, and other raw materials used in it, 323 respondents believe that wine is prepared from fermented grapes whereas 102 believe that the fruit wine are distilled from fruits other than grapes like plums, peaches and most used fruits. Second, familiar terms of wine are if the people are aware about the health benefits of moderate wine consumption. 261 respondents know that wine reduces heart attacks. Which is 64.76% of the respondents. 157 respondents are aware that wine increase cavity. 115 respondents are aware that wine helps to prevent coronary artery disease and 108 respondents are aware that wine consumption reduces the risk of developing cancer, liver disease, chronic pancreatitis, sleep disorder and more.

Inferential Analysis

a) Pre- Estimation

Under pre-estimation we perform specification error. Specification error is done to find out whether the variable or assumptions or statistical model is correct or not. After the regression command (in our case, logit or logistic), linktest uses the linear predicted value (_hat) and linear predicted value squared (_hatsq) as the predictors to rebuild the model. The variable _hat should be a statistically significant predictor and the variable _hatsq should not be statistically significant since it is the predicted value from the model.

Specification Error Test

Table 5: Specification Error Test

Linktest		
Iteration 0	log likelihood = -362.78896	
Iteration 1	log likelihood = -303.15058	
Iteration 2	log likelihood = -298.6334	
Iteration 3	log likelihood = -298.6146	
		Number of obs=403
Ordered Logistic Regression		LR chi2(2) =128.38
		Prob>chi2=0.0000

Log Likelihood=-298.60146			Pseudo R2=0.1769			
Awareness Index	Coeff	Std. Err.	z	P>|z|	[95% Conf. Interval]	
_hat	1.011658	1.769737	5.72	0.000	0.6647962	1.35852
Prob > χ^2	0.0039381	0.0493419	0.08	0.936	-0.09277034	0.100646
/cut1	-3.392787	0.2554933			-3.893544	-2.892029
/cut2	0.597158	0.1482771			0.3065402	0.8877759

From the test require of pre-estimation it is found that hat is statistically significant and _hatsq is statistically insignificant, it indicates there is no specification error in the obtained dataset and we have chosen meaningful predictors.

b) Post- Estimation

Under the post estimation, we perform multicollinearity and heteroscedasticity. This is not a time series data so there is no auto correlation.

Multicollinearity

Multicollinearity refers to the presence of linear relationships or non-linear relationships among explanatory variables. It occurs when independent variables in a regression model are correlated. Variance inflation factor (VIF) is a test to assess multicollinearity in our regression model. If VIF is greater than 10, there exist multicollinearity (Devkota & Mahapatra, 2025). The calculated VIF for the model is 1.54. Since multicollinearity is generally considered problematic when the VIF value exceeds 10, the obtained value is well below the accepted threshold (Table 6). Therefore, it can be concluded that there is no evidence of multicollinearity among the independent variables in the dataset Hence, the model satisfies the assumption of no multicollinearity.

Table 6: Multicollinearity Test Table

x	VIF	SQRT VIF	Tolerance	R-Squared
Awareness Index	**1.38**	**1.17**	**0.7249**	0.2751
Gender	**1.03**	**0.01**	**0.9733**	0.0276
Age	1.55	1.24	0.6465	0.3535
Education _Level	1.28	1.13	0.7792	0.2208
Marital_status	1.5	1.23	0.6656	0.3344
FermentationofGrape	1.47	1.21	0.6789	0.3211
DistillationfromFruits	1.42	1.19	0.703	0.297
FermentativeandDistillation	1.27	1.13	0.7856	0.2144
PressedorExtract	1.47	1.21	0.6795	0.3205
CoronaryArteryDisease	1.42	1.19	0.7062	0.2938
ReduceHeartAttack	1.56	1.25	0.643	0.357
IncreaseCavity	1.48	1.22	0.6758	0.3242
ReduceriskofCancer	1.35	1.16	0.7417	0.2583
Easy_Availability	1.74	1.32	0.5735	0.4265
Price	2.52	1.59	0.3967	0.6033
Discount_Offer	1.6	1.26	0.6262	0.3738
Taste	2.19	1.48	0.4569	0.5431
Advertisement	1.74	1.32	0.5735	0.4241

Brand_Name	2.32	1.52	0.4318	0.5682
Design_of_Bottle	1.4	1.18	0.7146	0.2854
WineconsumingPartner	1.11	1.06	0.898	0.102
PreferredBrand	1.04	1.02	0.968	0.032
Mean VIF	1.54			

Heteroscedasticity

Heteroscedasticity occurs when there is a large difference among the sizes of observation. Heteroscedasticity is the variability of one variable of one variable is not equal across range of another variable that is predicted. In other words, the heteroscedasticity refers to data which has unequal variance across the predictor variable. It occurs when there is difference in variance of the error terms for the range of observations. It is important to identify the heteroscedasticity as the results will be ruined when running the regression analysis. To understand our data set, we perform heteroscedasticity test. It indicates prob>chi2 should be greater than 0.05 to fit the model. There is no heteroscedasticity present in the dataset as the prob chi2 is 0.2705 it is more than 0.05. So, the dataset is free from heteroscedasticity.

Table 7: Heteroscedasticity Table

Breusch-Pagan/Cook-Weisberg test for heteroskedasticity	
H0	Constant Variance
Varibles	Fitted values of AwarenessIndex
chi2(1)	1.21
Prob>chi2	0.2705

c) Final Result Estimation

Under this estimation, we perform ordinary logistic regression after using robust standard error. We also find the odds ratio, marginal effect and logit co-efficient so as to calculate the results. The term "coefficient of variation" is frequently used to describe a variable's variability. When exposed to treatment/dependent variables, odds ratio (OR) compares the change of an outcome occurring to absence. Likewise marginal effects tell us how a dependent variable (outcome) changes a specific independent variable (explanatory variable) change.

Summary Statistics

Summary statistics describe the data for communicating the largest amount of information as clear as possible. There is displayed mean, standard deviation, minimum and maximum number for giving the information about the gathered data. For making the research, all the variables expect age, monthly income has been illustrated in dummy variable 0 and 1 where zero holds minimum value and one maximum value also where one represents yes and zero otherwise. The study has been observed among 403 respondents. Table 8 illustrates the fifteen variables used for this study. It presents information about one dependent variable and twenty-one independent variables considered for the study. Under socio-demographic variables, level of monthly income had highest mean and standard deviation of 35.84367 and 7.804061 respectively with minimum value 0 and maximum value 99. Looking towards awareness index the mean and standard deviation are 1.042184 and .5990932 respectively. Similarly talking about gender of respondents, the mean and standard deviation are 1.019851 and 4.910604 followed by age that has the highest meaning 35. 84367 and standard deviation of 7.804061. In case of education level, the mean and standard deviation are .4317618 and .4959373 respectively. The mean and standard deviation of marital status are .7841191 and .4119435 respectively.

Table 8: Summary Statistics Table

x	Coef.	Std. Err.	z	P>|z|	[95% Conf. Interval]	
Gender	-.0176434	.0222	-0.79	0.428	-.0612	.0259
Age	-.0385228	.0173	-2.22	0.026	-.0725	-.0045
Education _Level	-.6965124	.2485	-2.80	0.005	-1.1835	-.2094
Marital_status	-.0466264	.3141	-0.15	0.882	-.6623	.5691
FermentationofGrape	2.284462	.3294	6.93	0.000	1.6387	2.9301
DistillationfromFruits	0.2556361	.2852	0.90	0.370	-.3034	.8147
FermentativeandDistillation	0.022141	.2641	0.08	0.933	-.4956	.5399
PressedorExtract	0.4076104	.2601	1.57	0.117	-.1022	.9174
CoronaryArteryDisease	-.0577687	.2803	-0.21	0.837	-.6071	.4916
ReduceHeartAttack	.468007	.2815	1.66	0.096	-.0837	1.0197
IncreaseCavity	.1537619	.2647	0.58	0.561	-.3650	.6726
ReduceriskofCancer	-.0537563	.2786	-0.19	0.847	-.5999	.4924
Easy_Availability	1.198421	.5930	2.02	0.043	.0312	2.3607
Price	-.7233199	.9472	-0.76	0.445	-2.5799	1.1333
Discount_Offer	.2911261	.9536	0.31	0.760	-1.5780	2.1603
Taste	-2.523274	1.2342	-2.04	0.041	-4.9723	-.1041
Advertisement	.8156687	.5888	1.39	0.166	-.3384	1.9698
Brand_Name	-2.010413	.9124	-2.20	0.028	-3.7987	-.2220
Design_of_Bottle	-.2175642	.4292	-0.51	0.612	-1.0588	.6237
WineconsumingPartner	-.6766083	.2615	-2.59	0.010	-1.1892	-.1640
PreferredBrand	4.469249	.8409	1.75	0.081	-.1789	3.1174
/cut1	-3.391695	1.4826			-6.2976	-.4857
/cut2	.5983825	1.4842			-2.3106	3.5074

In the case of fermentation of grapes, the mean and standard deviation is .8014888 and .3993748, followed by distillation of fruit with mean of .2531017 and standard deviation of .4353292. In the case of fermentation and distillation of wine the mean is .280397 and standard deviation of .4497516, followed by pressed of extract juice with the mean of .439206 and standard deviation of .4969072. In the case of coronary artery disease, the mean is .2853598 and standard deviation of .452147. In the case of Reduction of heart attack, the mean is .6476427 and standard deviation is .4782983. In case of increase in cavity the mean is .3895782 and the standard deviation of .4882608. In case of reduction of risk of cancer, the mean is .2679901 and the standard deviation of .4434629. In the case of easy availability, the mean is .9354839 and the standard deviation of .2459755. In the case of price, the mean is .9677419 and the standard deviation of .1769043. In the case of discount, the mean and standard deviation is .9776675 and .1479462 respectively, followed by taste with the mean and standard deviation of .9826303 and .130807? In the case of advertisement, the mean is .9379643 and the standard deviation of .2415815. In the case of Brand name, the mean is .9702233 and the standard deviation of .1701819.

Logistic Regression analysis

Ordered logistic regression is a regression model for an ordinal response variable. The model is based on the cumulative probabilities of the response variable: in particular, the logit of each cumulative probability is assumed to be a linear function of the covariates with regression coefficients constant across response categories (Nwakuya, & Mmaduka, 2019).

The robustness tests have been emerged as a response to uncertainty faced by the social scientist in specifying the empirical models. Robust standard error is a technique applied for obtaining unbiased standard errors of OLS under heteroscedasticity or can be understood as the activities conducted when performing the activities like the task and solutions. It can be analyzed by three processes,

- Odds ratio
- Coefficient
- Marginal effect

In ordered logistic regression, the odds ratio represents the constant effect if a predictor X, on the likelihood that one outcome will occur. In regression models, we often want a measure of the unique effect of each X and Y. In the table 4 there are nine significant variables, namely Gender, age, education level, marital status, fermentation of grapes, distilled from fruits, fermentation and distillation, pressed or extract, coronary artery disease, increase cavity, reduce risk of cancer, price, easy availability, discount offer, taste, advertisement, brand name, design of bottle, brand name, wine consumption with family.

Table 9: Summary Index Table

	(1)	**(2)**	**(3)**
Variables	logit coeff	Odds ratio	marginal effect
AwarenessIndex			
Gender	-0.0176	0.983	0.00184
	(0.0223)	(0.0219)	(0.00232)
Age	-0.0385**	0.962**	0.00401**
	(0.0174)	(0.0167)	(0.00181)
Education_Level	-0.697***	0.498***	0.0725***
	(0.249)	(0.124)	(0.0261)
Marital_status	-0.0466	0.954	0.00485
	(0.314)	(0.300)	(0.0327)
FermentationofGrape	2.284***	9.820***	-0.238***
	(0.329)	(3.235)	(0.0301)
DistilledfromFruits	0.256	1.291	-0.0266
	(0.285)	(0.368)	(0.0297)
FermentationandDistillation	0.0221	1.022	-0.00230
	(0.264)	(0.270)	(0.0275)
PressedorExtract	0.408	1.503	-0.0424
	(0.260)	(0.391)	(0.0271)
CoronaryArteryDisease	-0.0578	0.944	0.00601
	(0.280)	(0.265)	(0.0292)
ReduceHeartAttack	0.468*	1.597*	-0.0487*
	(0.282)	(0.450)	(0.0295)
IncreaseCavity	0.154	1.166	-0.0160
	(0.265)	(0.309)	(0.0276)
ReduceriskofCancer	-0.0538	0.948	0.00559
	(0.279)	(0.264)	(0.0290)

Easy_Availability	1.198**	3.315**	-0.125**
	(0.593)	(1.966)	(0.0614)
Price	-0.723	0.485	0.0753
	(0.947)	(0.460)	(0.0984)
Discount_Offer	0.291	1.338	-0.0303
	(0.954)	(1.276)	(0.0992)
Taste	-2.523**	0.0802**	0.263**
	(1.234)	(0.0990)	(0.130)
Advertisement	0.816	2.261	-0.0849
	(0.589)	(1.331)	(0.0610)
Brand_Name	-2.010**	0.134**	0.209**
	(0.912)	(0.122)	(0.0952)
Design_of_Bottle	-0.218	0.804	0.0226
	(0.429)	(0.345)	(0.0446)
WineconsumingPartner	-0.677***	0.508***	0.0704**
	(0.262)	(0.133)	(0.0275)
Preferred Brand	1.469*	4.346*	-0.153*
	(0.841)	(3.655)	(0.0876)
Constant cut1	-3.392**	0.0337**	
	(1.483)	(0.0499)	
Constant cut2	0.598	1.819	
	(1.484)	(2.700)	
Observations	403	403	403

Standard errors in parentheses

*** p<0.01, ** p<0.05, * p<0.1

Now from table 9 it can say that increase in the age of respondents; the odds ratio of awareness index increases by 0.96 times. The table presents that education there are altogether 8 independent variables that are significant. In the case of education level fermentation of grape and wine consuming partner they are significant by 1% level of significance. In the case of age, taste, easy availability and brand name they are significant by 5% level of significance. In case of other independent variables like reducing heart attack and preferred brand they are significant by 10% level of significance. Remaining variables could not show the relationship between the dependent variables. The relationship is not sure. Among the significant variables the variables like fermentation of grapes, reducing heart attack, easy availability and preferred brand are positively significant. It means fermentation of grapes, reducing heart attack, easy availability and preferred brand increases awareness. Whereas variables like gender, age, taste and brand name are negatively significant. Which means age, taste, gender and brand name decreases awareness.

From the odds ratio analysis it can be seen there are 9 significant variables they are age, education level, fermentation, reduce heart attack, easy availability, taste, brand name, wine consuming partner and preferred brand name. Among all these significant variables the variable like one unit increases in fermentation of grapes increase awareness of index by 9.82 times. Similarly, one unit increase in reduction of heart attack increase awareness index by 1.59 times. Furthermore, one unit of increase in easy availability increases awareness index by 3.31 times. Similarly, one unit of increase in preferred brand increases awareness index by 4.34 times.

Similarly, with the change in age the marginal effect of wine consumption increases by 0.004. Furthermore, with the change in education level the awareness of wine consumption increases by 0.07. In the case of fermentation of grapes, the awareness index of wine consumption decreases by 0.23. Similarly in the case of change of awareness regarding the reduction of heart attack with the consumption of wine which comes under the benefits of wine decreases by 0.04 times. The first model of this study is related to alcohol consumption in the various forms like beer, brandy, wine and other alcoholic beverage products by the respondent. The result presented in the table signifies that the age, education level, fermentation of grapes, reduction of heart attack, easy availability, taste, brand name, wine consuming partner and preferred brand content are significantly related to consumption of alcohol.

5. Discussion

The result from socio-demographic characteristics shows that there are 77.42% male and 22.33% female who consumes wine. It shows that gender plays a significant role in wine consumption. The respondents are slightly more from Kathmandu valley. The respondents who have completed bachelor's level of education seem to consume more wine than others, which is 47.64%. The result shows that the respondent from business seems to be consuming more wine and have more knowledge about wine. 40.45% of respondents seem to consume wine occasionally. Wine becomes the most preferred alcoholic beverage among the wine, whisky, brandy, vodka, rum, scotch and gin. Whereas big master is the most preferred and grapple is the least preferred brand in wine. The general understanding interpretation table shows that 72.46% of people consider wine as a premium product. 67% of people are familiar with the percentage of alcohol that is used in wine. 70.72% respondents think that foreign wine is better than domestic wine. which shows that people are more aware of the terms that are related to wine like what wine is made of, the health benefits that wine provides.

The result from the inferential analysis shows that age, education, fermentation of grapes, wine reduces heart attack, easy availability of wine, taste, brand name, wine consuming partner, preferred brand is statistically, the factors that influence the awareness level wine consumption which ultimately helps to find that these factors are significant and determines the prospects of wine business in Kathmandu valley. The result also suggests the managerial implications for the promotion of wine business in Kathmandu Valley.

6. Conclusion

This study examined the general understanding and prospects of the wine business in Kathmandu Valley using an explanatory research design. Based on data collected from 403 respondents aged between 20 and 60 years through convenience sampling, both descriptive and inferential analyses were conducted, including pre-estimation, post-estimation, and ordered logistic regression. The findings reveal that a majority of respondents are aware of wine brands, composition, and perceived health benefits. Consumer preference is significantly influenced by socio-demographic factors, intrinsic attributes (taste, alcohol content, bottle appearance), and extrinsic factors (price, brand name, advertisement, and availability). Although awareness levels are relatively high, the domestic wine industry faces structural challenges, including limited technological advancement, inadequate research and development, and strong competition from imported premium wines that dominate the Nepali market

The study offers both theoretical and practical implications. Theoretically, it contributes to the literature on emerging beverage markets by applying valuation-based and consumer behavior perspectives to assess business prospects. Practically, the findings provide guidance to wine producers, marketers, and policymakers in designing effective pricing, branding, promotional, and distribution strategies. Emphasis on product quality improvement, technological upgrading, and experiential marketing can enhance competitiveness. However, the study is limited to Kathmandu Valley and includes broad age categories and general wine types. Future research could expand to other major cities of Nepal, focus on specific consumer segments, compare domestic and imported wines, and incorporate longitudinal analysis to

better understand evolving consumption patterns and market dynamics.

References

Allen, R. C. (2011). *Global economic history: A very short introduction* (Vol. 282). Oxford University Press.

Bhatta, S., Devkota, N., Paudel, U. R., & Danuwar, R. K. (2023). Prospect of tourism development in Khaptad National Park: a local perspective. *Journal of Tourism & Adventure*, *6*(1), 53-71.

Carson, R. T. (2011). Contingent valuation: a comprehensive bibliography and history. In *Contingent Valuation*. Edward Elgar Publishing.

Devkota, N., & Mahapatra, S. K. (2025). *Quantitative and Applied Research Methodology in Economics: Researching, Reporting and Publishing*. Taylor & Francis.

Devkota, N., Khamcha, S., Upretee, S., Paudel, U. R., & Mahato, S. (2023). Visitors' perceptions of homestay management in Nepal: Evidence from structural equation modelling. In *Handbook of Research on Sustainable Tourism and Hotel Operations in Global Hypercompetition* (pp. 235-254). IGI Global Scientific Publishing.

Duan, J., Guo, H., Fang, Y., & Zhou, G. (2021). The mechanisms of wine phenolic compounds for preclinical anticancer therapeutics. *Food & Nutrition Research*, *65*, 10-29219.

Dunning, J. H. (2013). Changes in the level and structure of international production: the last one hundred years. In *The growth of international business (RLE International Business)* (pp. 84-139). Routledge.

Gilinsky Jr, A., Newton, S. K., & Vega, R. F. (2016). Sustainability in the global wine industry: Concepts and cases. *Agriculture and agricultural science procedia*, *8*, 37-49.

Golicic, S. L. (2022). Changes in sustainability in the global wine industry. *International Journal of Wine Business Research*, *34*(3), 392-409.

Gregg, J. S., Jürgens, J., Happel, M. K., Strøm-Andersen, N., Tanner, A. N., Bolwig, S., & Klitkou, A. (2020). Valorization of bio-residuals in the food and forestry sectors in support of a circular bioeconomy: A review. *Journal of Cleaner Production*, *267*, 122093.

IBISWorld. (2021). Wine Production in the US - Market Size 2006-2027.

International Organisation of Vine and Wine. (2021). *2020 world wine production: First estimates*. https://www.oiv.int/public/medias/7541/en-oiv-2020-world-wine-production-first-estimates.pdf Accessed February 23, 2026.

Jiang, H., Luo, Y., Xia, J., Hitt, M., & Shen, J. (2023). Resource dependence theory in international business: Progress and prospects. *Global strategy journal*, *13*(1), 3-57.

Karmacharya, J., Shrestha, P., Karki, T. B., & Pant, O. P. (2024). Isolation and identification of yeasts in marcha, a rice wine starter culture from Nepal. *International Journal of Food Science*, *2024*(1), 4188578.

Lawaju, P., Adhikari, S. U., & Devkota, J. (2024). Impact of AI in education: Evidence from use of ChatGPT in management education in Nepal. *Quest Journal of Management and Social Sciences*, *6*(3), 621-642.

Leonov, Y., Nakonechnyi, O., Khalimanenko, V., Nikolaiko, H., & Heraimovych, V. (2023). Analysis of the influence of psychological factors on consumer behavior and the decision-making process. *Economic Affairs*, *68*(3), 1643-1651.

Maharjan, R., Devkota, N., Mahapatra, S. K., Paudel, U. R., Parajuli, S., Bhandari, U., & Karki, D. (2022).

Consumers' preference on consumption of brandy among other alcoholic beverages in Kathmandu Valley, Nepal. *Quest Journal of Management and Social Sciences*, *4*(1), 42-57.

Matese, A., & Filippo Di Gennaro, S. (2015). Technology in precision viticulture: A state of the art review. *International journal of wine research*, 69-81.

Ncube, A., Fiorentino, G., Colella, M., & Ulgiati, S. (2021). Upgrading wineries to biorefineries within a Circular Economy perspective: An Italian case study. *Science of the Total Environment*, *775*, 145809.

Nepal, G. (2024). Industrial Development in Nepal: Navigating Challenges and Harnessing Opportunities. *State, Society and Development: PMPD Perspectives*, *2*, 73-83.

Nwakuya, M. T., & Mmaduka, O. (2019). Ordered logistic regression on the mental health of undergraduate students. *International Journal of Probability and Statistics*, *8*(1), 14-18.

Parajuli, M., Bhandari, S., & Bhujel, T. (2025). Branding of Local Alcohol in Nepal.

Parajuli, S., Thapa, B., Devkota, N., Raj, U., & Paudel, S. G. (2021). Female consumers awareness level on purchasing online beauty products in Kathmandu Valley. *Nepalese Journal of Management Science and Research*, *6*(1), 161-177.

Rodrigues, R. P., Gando-Ferreira, L. M., & Quina, M. J. (2022). Increasing value of winery residues through integrated biorefinery processes: a review. *Molecules*, *27*(15), 4709.

Shrestha, S. (2022). *Factors Associated with Alcohol Consumption During Festival among the People of Kathmandu* (Doctoral dissertation, Faculty of Management).

Singh, S., Lawaju, P., Paudel, U. R., & Poudel, D. K. (2024). Impact of Perceived Experiential Advertising on Consumer Behavior in Nepal: Evidence from SOR Theory. *Quest Journal of Management and Social Sciences*, *6*(2), 459-476.

Smith, V. K. (2006). Fifty years of contingent valuation. *Handbook on Contingent Valuation*, 7-65.

Tanrikulu, C. (2021). Theory of consumption values in consumer behaviour research: A review and future research agenda. *International journal of consumer studies*, *45*(6), 1176-1197.

Varpio, L., Paradis, E., Uijtdehaage, S., & Young, M. (2020). The distinctions between theory, theoretical framework, and conceptual framework. *Academic medicine*, *95*(7), 989-994.

Wirtz, B., Göttel, V., & Daiser, P. (2016). Business model innovation: Development, concept and future research directions. *Journal of Business Models*, *4*(1), 1-28.

Zabaniotou, A., Kamaterou, P., Pavlou, A., & Panayiotou, C. (2018). Sustainable bioeconomy transitions: Targeting value capture by integrating pyrolysis in a winery waste biorefinery. *Journal of cleaner production*, *172*, 3387-3397.