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## Article

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# Profiling the high frequency wine consumer by price segmentation in the US market

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## Abstract

Heavy users of consumer products are important to marketers as a profitable target segment. This is equally true in the wine industry, but with the added precaution of encouraging responsible consumption. This study examines the attributes and behaviors of 681 high frequency (heavy-user) wine consumers in the US, based on a price segmentation of High, Moderate, and Low Spenders. For this study, price segmentation was defined as the price typically paid for a bottle of wine for home consumption. Significant differences were discovered based on gender, age, income, wine involvement, shopping channel, ecommerce/social media usage and other key areas. Implications for marketing managers as well as areas of future research are described.

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*Keywords:* Consumer behavior; Price segmentation; Wine; Heavy users

## 1. Introduction

The concept of heavy-users in a consumer product category has been important to marketing researchers for decades (Twedt, 1964; Cook and Mindak, 1984; Hallberg, 1995). By focusing on the demographics, attitudes, and behaviors of these segments of consumers, marketing researchers can better understand what motivates them and consequently develop promotions that will encourage continued, and perhaps increased, product purchases.

When applied to the wine industry, however, the heavy user concept must be modified somewhat, because the alcoholic effect of the product can be unhealthy if consumed in high amounts. Therefore, in the US wine industry, promotion of wine consumption is generally done with a reminder to drink in moderation (Wine Institute, 2014a, 2014b). As growth in the volume of consumption is desirable only to a point, marketers

must encourage consumers to trade up to higher priced bottles to drive revenue growth.

Recently the Wine Market Council (2014) has completed research showing that of the 230 million adults in the US, 40% drink wine. Of these, 33% are defined as high frequency drinkers, or those who consume wine more than once a week, and the remaining 67% are considered occasional drinkers because they drink wine once a week or less. The high frequency drinkers can be perceived as matching the heavy-user category, and indeed, this group consumes 81% of all wine in the US.

Obviously these high frequency wine consumers are a sought after market for wine firms. These consumers buy the majority of wine sold and often serve as opinion leaders in the product category. However, frequent drinkers are not a homogenous segment of the wine market. One important characteristic that can be used to distinguish among frequent wine drinkers is how much they typically spend on a bottle of wine. We have chosen to look at the purchase of wine for home consumption. While it is certainly the case that consumers may spend more for a bottle of wine for a special occasion to be celebrated at home, the fact that these consumers usually drink wine several times during the

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week suggests that the most of their bottle purchases are for casual consumption.

Therefore, this study was developed to investigate how the amount of money high frequency (HF) wine consumers typically spend on wine influences attitudes and behaviors related to wine consumption and purchase. In order to do this, we segmented a national sample of 681 HF wine consumers into three groups based on the amount they typically spend for a bottle of wine to be consumed at home. We then sought to identify differences in demographics, attitudes and behaviors among the three groups. The results illustrate implications and potential recommendations to wine marketers on how to best appeal to the different segments of the market.

## 2. Review of the literature

### 2.1. Marketing research on frequency and volume of purchase

Many marketers are familiar with the concept of the Pareto Effect, which states that a certain percentage of consumers purchase a higher percentage of a product category. In general, this is referred to as the 80/20 rule, in which 80% of the product or process is a result of 20% of the consumers or effort. This concept was highlighted in Twedt (1964) segmentation work that placed consumers into the three categories of heavy, light and non-byers.

However, later research has shown that the heavy users are not always the best-behaved, because they can be price conscious, which causes them to look for deals before purchase, and can result in brand switching and disloyalty (Clancy and Shulman, 1994). Furthermore, the Pareto effect has been shown to differ by product category. Indeed in previous research in the wine industry, it has been shown to range from 75% (Sharp, 2010) to 55–65% and varies over time (Habel et al., 2003).

### 2.2. Global research on high frequency (HF) wine drinkers

The research that has been conducted on heavy wine users spans in the globe, in that it can be found in France, Australia, the UK, and the US, and focuses on demographics, attributes and values. One of the earliest studies (Goldsmith and D'Hauteville, 1998) was conducted with 392 adult American consumers and found that HF wine drinkers are highly involved and interested in wine. A French study of 4010 consumers (D'Hauteville, 2003) discovered that HF drinkers are also highly involved with wine, and also possess higher incomes, and have strong value of social integration. In the UK a study of 100 common wine brands (Chrysochou et al., 2011), showed that HF drinkers are more loyal by country of origin and grape varietal.

In Australia, a fascinating study of 4800 consumers was conducted to analyze the Pareto Effect of wine, beer, and spirits purchases (Habel et al., 2003). Researchers found that there was a difference between the three product categories and that it varied over time. A more recent US study of over 1000 wine consumers showed that HF drinkers more often fall into

both the Baby Boomers and Millennials generations and buy wine most often at wine specialty stores (Wine Market Council, 2015).

Despite the promising number of studies to date on high frequency (heavy user) wine consumers, there are no studies that examine segmentation of these consumers by price point. Therefore, this opens a new window for investigation.

### 2.3. Overview of US wine industry

The US is considered to be the largest wine market in the world in terms of both volume and value (Wine Institute, 2014a, 2014b). In 2014, it is estimated that wine revenues approached \$40 billion, with 69% of wine sales coming from domestic products and 31% from imported wine (Frederickson, 2015).

There are 8287 wineries in the US (Gordon, 2015), with California producing more than 90% of the wine. The next five largest wine producing states are Washington, Oregon, New York, Virginia and Texas. Though wine consumption is only 3.14 gal (11.9 l) per capita (Wine Market Council, 2015), the good news is that wine sales have been growing at a rate of 2 to 3% per year in the US market for the past 21 years (Wine Institute, 2014a, 2014b).

Due to its large size and positive trends in wine consumption, the US is considered to be a prime consumer target for most large wine producing nations. Information about its consumer preferences, and especially high frequency drinkers, is important.

## 3. Research question

What differences are there between high frequency wine consumers when segmented by the three pricing tiers of High, Moderate, and Low Spenders?

1. Differences in demographics (gender, age, income, education, and children)?
2. Differences in attitudes (wine involvement, wine knowledge, satisfaction with wine selection and price)?
3. Differences in behavior (preferred varietals, shopping channels, ecommerce and social media usage).

## 4. Methodology

### 4.1. Survey and data collection

An on-line questionnaire composed of 33 questions was developed. Question topics included basic demographic information, attitudes, and behavior questions, and standard Likert scale questions regarding self-reported wine knowledge, involvement and satisfaction were employed. The survey was beta-tested and revisions made based on the feedback.

The survey was launched in 2014 via Survey Monkey for a period of one week. Data collection came from panel data provided by *Survey Sampling International*. A representative

sample of wine drinkers was obtained from all regions of the United States. All participants in the study were screened to insure they were 21 years old and consumed wine. A total of 1021 responses were obtained. From these responses, 681 people indicated they consumed wine either daily or at least several times of week and their responses were selected for further use in this study.

#### 4.2. Development of market segments

The median price paid for wine in the US is currently between \$10–\$15 (Brager, 2015). In our sample, there were 242 respondents that indicated this was the price they typically paid for a bottle of wine to be consumed at home. Another 261 respondents indicated they typically spend less than \$10, and 190 respondents indicated they typically spend more than \$15. The respondents were categorized into 3 groups based on the amount of money they typically spend on wine and were labeled Low Spenders, Moderate Spenders and High Spenders.

#### 4.3. Data analysis and measurement of constructs

One-way ANOVA was used to identify significant differences between the 3 expenditure groups. When significant differences were uncovered, Duncan's Ranges were used to discover which group(s) differed from the others. Variables used in the analyses included demographics, wine involvement and knowledge, satisfaction with selection and pricing, preferred marketing channels for purchase, and the use of online and social media. Involvement was measured with a 4-item scale previously developed for wine (Brown et al., 2006; Pratt, 2010). Wine knowledge was self-reported, asking respondents if they viewed themselves as novices, intermediate, advanced or connoisseurs. Marketing channels that were investigated were: supermarkets, drug stores, discount and warehouse stores, convenience stores, wine and liquor shops, and winery tasting rooms. Respondents were asked how often they buy wine at these locations, with the responses on a 5-point scale ranging from never to almost always. Satisfaction with selection asked respondents how satisfied they were with the wine selection available where they shop, the difficulty in finding the exact wine they wanted, and if they wish they had a greater selection from which to choose. Satisfaction with price asked respondents how satisfied they were with the wine prices where they shop, the difficulty in finding wines at their preferred price points, and the belief that wine prices are too high. Aspect of social media measured were whether the respondent uses the web to purchase wine, and if they use social media platforms to get wine information, look up prices, and get recommendations for wine. With the growing popularity of mobile phones, we asked respondents if they used apps for mobile phones, for wine information, and to get access to deals and coupons.

## 5. Results

### 5.1. Demographic differences between the three segments

For demographics, gender, age, children under 18 at home, income, and education were examined. For gender, High Spenders were more apt to be male, Moderate Spenders to be female, and Low Spenders to be either male or female.

Age was a significant variable that distinguished between all three groups. The Low Spenders were the oldest with an average age of 50; the Moderate Spenders were somewhat younger with an average age of 43 and the High Spenders were the youngest, with an average age of 38. Low Spenders were also more likely to have at least one child under age 18 at home.

As expected, household income did distinguish between the expenditure groups, with the Low Spending group having significantly lower income than the other two segments. However, there were no income differences between the Moderate and High Spender groups. Therefore, lack of financial resources might explain purchases of wine at lower price points, but financial resources do not distinguish those consumers who pay only the median price from those willing to pay more.

Interestingly, there was no significant difference between the 3 groups in terms of educational attainment. In terms of gender, differences were found only at the .10 level of significance, the Low Spenders were equally divided between men and women, the Moderate Spenders were slightly more likely to be female and the High Spenders were slightly more likely to be male.

### 5.2. Attributes differences between the three segments

For attitudes, wine involvement, wine knowledge, and satisfaction with wine selection and price were examined. Not surprisingly, involvement and knowledge were related to the amount typically spent on a bottle of wine. The High Spenders were the most involved with wine in general, expressed a greater interest in wine, enjoyed conversations about wine and considered the purchase of wine to be an important decision. The Moderate Spenders were less involved, and the Low Spenders were the least involved. Perhaps due to their higher levels of involvement with wine, the High Spenders also felt most knowledgeable about the topic.

There were no differences in satisfaction with wine selections available at their wine shops, but the High Spenders did express more difficulty in finding the exact wine they wanted. The High Spenders were also more likely to wish they had a greater selection of wine from which to choose. The High Spenders were also most satisfied with the prices of wine although they were most likely to express difficulty in finding wines at the prices they prefer. Interestingly, there were no significant differences between segments on the belief that the price of wine is generally too high.

Table 1  
Demographic differences among price segments.

Variable	Low Spenders mean (standard deviation)	Moderate Spenders mean (standard deviation)	High Spenders mean (standard deviation)	F-score (significance)	Group differences
Gender (1 = male, 2 = female)	1.50 (.50)	1.54 (.50)	1.43 (.50)	2.42 (.090)	Groups 2 from 3
Age	49.61 (17.25)	43.23 (13.92)	37.52 (15.54)	36.66 (.000)	Group 1 from 2 from 3.
Education (6 categories)	3.75 (1.28)	3.77 (1.17)	3.96 (1.15)	1.64 (.195)	None
Income (8 categories)	4.54 (1.94)	5.12 (1.82)	5.33 (1.67)	11.55 (.000)	Group 1 from 2 and 3
Children under 18 (1 = no, 2 = yes)	1.67 (.47)	1.49 (.50)	1.40 (.49)	17.96 (.000)	Group 1 from 2 and 3

Group 1,  $N=161$ , Group 2,  $N=242$ , Group 3,  $N=190$ .

Table 2  
Attitude differences among price segments.

Variable	Low Spenders mean (standard deviation)	Moderate Spenders mean (standard deviation)	High Spenders mean (standard deviation)	F-score (significance)	Group differences
Wine involvement (4-item scale, $\alpha=.92$ . Average scores 1–5)	3.80 (.71)	4.17 (.57)	4.46 (.68)	63.36 (.000)	Group 1 from 2 from 3
Wine knowledge	2.00 (.67)	2.24 (.71)	2.53 (.73)	31.39 (.000)	Group 1 from 2 from 3
Wine selection (5-point scales)					
1. Satisfaction with selection	3.92 (.77)	4.03 (.71)	4.02 (.89)	1.53 (.218)	None
2. Difficulty in finding the wine they want	2.69 (1.05)	2.85 (1.14)	3.23 (1.28)	12.35 (.000)	Groups 1, 2 from 3
3. Wants greater variety	3.04 (1.10)	3.27 (1.13)	3.80 (1.11)	25.67 (.000)	Group 1 from 2 from 3
Wine prices (5-point scales)					
1. Satisfaction with prices	3.87 (.70)	3.90 (.76)	4.02 (.79)	2.28 (.104)	Group 1 from 3
2. Difficulty in finding wine at preferred prices	2.74 (1.01)	2.83 (1.18)	3.02 (1.32)	3.15 (.043)	Group 1 from 3
3. Wine prices are too high	3.05 (1.02)	2.97 (1.09)	3.05 (1.10)	.422 (.656)	None

Group 1,  $N=161$ , Group 2,  $N=242$ , Group 3,  $N=190$ .

Table 3  
Favorite wine varietals of the price segments.

Low Spenders	Moderate Spenders	High Spenders
1. Merlot	1. Merlot	1. Chardonnay
2. Cabernet Sauvignon	2. Chardonnay	2. Merlot
3. Chardonnay	3. Cabernet Sauvignon	3. Pinot Grigio
4. White Zinfandel	4. Pinot Grigio	4. Cabernet Sauvignon

High Spenders are the most interested and curious about wine, and wish they had a greater selection of wines to choose from at their stores, but they are no more likely to find the price of wine too high, or desire lower prices than those who spend less (Tables 1 and 2).

### 5.3. Behavior differences between the three segments

For behavior, preferred varietals, shopping channels, and ecommerce/social media usage were examined. The first aspect we explored was whether the favorite varietals of the 3 groups were different. Eighteen popular wine varietals were selected

for inclusion in the survey and respondents were asked if they considered it a favorite. The varietal ranking for each group was then observed. The favorite choices in order are listed in Table 3. Merlot, Cabernet Sauvignon, and Chardonnay appear as favorites in all 3 price segments, although the order of preference differs slightly. For the remaining varietal in the top 4, the Low Spenders preferred White Zinfandel while the Moderate and High Spenders more likely to mention Pinot Grigio as a top favorite (Tables 4 and 5).

In terms of shopping channels, the Low Spender group was most likely to purchase their wines from grocery stores, where as the Moderate and High spender groups were most likely to use discount or warehouse stores. The High Spender group also was more likely to purchase wine from a variety of channels, including drug stores, convenience stores, wine and liquor shops and winery tasting rooms. The High Spenders enjoy wine tourism the most and are most likely to travel for wine, and purchase wine directly from a winery.

For ecommerce/social media usage the findings suggest that how much frequent wine drinkers spend on wine is also related to how web savvy they are and whether they get their wine



Table 4  
Channel differences among price segments.

Variable	Low Spenders mean (standard deviation)	Moderate Spenders mean (standard deviation)	High Spenders mean (standard deviation)	F-score (significance)	Group differences
Grocery store	3.55 (1.25)	3.19 (1.21)	3.23 (1.23)	6.21 (.002)	Group 1 from 2 and 3
Discount or warehouse store	2.60 (1.26)	2.87 (1.23)	3.04 (1.16)	7.21 (.001)	Group 1 from 2 and 3
Drug store	1.99 (1.20)	2.15 (1.28)	2.48 (1.39)	7.83 (.000)	Group 1 and 2 from 3
Convenience store	1.96 (1.23)	2.18 (1.32)	2.57 (1.42)	11.29 (.000)	Group 1 and 2 from 3
Wine or liquor store	3.36 (1.14)	3.80 (1.08)	4.17 (.87)	32.74 (.000)	Group 1 from 2 from 3
Winery tasting room	2.22 (1.18)	2.56 (1.30)	3.42 (1.24)	51.49 (.000)	Group 1 from 2 from 3
Enjoys wine tourism	3.75 (.97)	3.89 (.98)	4.18 (.86)	11.58 (.000)	Group 1 and 2 from 3
Traveled to visit wineries	3.50 (1.23)	3.77 (1.14)	4.09 (1.01)	14.45 (.000)	Group 1 from 2 from 3
Prefers to buy directly from winery	3.10 (1.05)	3.37 (1.05)	3.77 (1.01)	22.63 (.000)	Group 1 from 2 from 3

Group 1,  $N=161$ , Group 2,  $N=242$ , Group 3,  $N=190$ .

Table 5  
Web and social media differences among price segments.

Variable	Low Spenders mean (standard deviation)	Moderate Spenders mean (standard deviation)	High Spenders mean (standard deviation)	F-score (significance)	Group differences
Buys wine online	1.68 (1.11)	2.07 (1.26)	2.70 (1.33)	35.88 (.000)	Group 1 from 2 from 3
Social media uses					
Discuss wine	1.91 (.99)	2.29 (1.00)	2.78 (1.04)	40.47 (.000)	Group 1 from 2 from 3
Get information	2.08 (1.09)	2.44 (1.04)	2.98 (1.02)	39.42 (.000)	Group 1 from 2 from 3
Look up prices	1.85 (1.06)	2.25(1.09)	2.77 (1.07)	39.73 (.000)	Group 1 from 2 from 3
Ask a friend for recommendation	2.00 (1.05)	2.34 (1.09)	2.84 (1.03)	34.33 (.000)	Group 1 from 2 from 3
Mobile phone uses					
Has wine apps	1.82 (.38)	1.69 (.46)	1.52 (.50)	25.81 (.000)	Group 1 from 2 from 3
Uses apps for information	1.83 (.38)	1.71 (.46)	1.54 (.50)	23.34 (.000)	Group 1 from 2 from 3
Use apps for coupons	1.82 (.38)	1.71 (.46)	1.53 (.50)	22.73 (.000)	Group 1 from 2 from 3

Group 1,  $N=161$ , Group 2,  $N=242$ , Group 3,  $N=190$ .

information from a computer or from a phone. The High Spender group was most likely to buy wine online followed by the Moderate Spenders and then the Low Spenders. The High Spenders are most likely to use social media to discuss wine, find more information about wine, look up wine prices, and ask a friend for a recommendation about wine. Low Spenders were the respondents most likely to have wine apps on their phone, use apps to get coupons on wines, and to check wine prices. What is interesting about this finding is that the Low Spending group was also the oldest of the three segments, not

an age group most often associated with the use of mobile technology.

#### 5.4. Profiles of the 3 high frequency consumer segments

Based on the significant variables identified in this study, it is possible to create profiles of the consumers in the three different price segments. Table 6 highlights the major differences between the HF wine drinkers.

Table 6  
Profiles of HF wine drinkers by price segment.

Significant variables	Low Spenders	Moderate Spenders	High Spenders
<b>Demographics</b>			
Income	Lower income	Mid to high income	Mid to high income
Age	50 and above (Older)	Average of 43	Average of 38 (Youngest)
Gender	Both men and women	More women	More men
Children	More apt to have children under 18	NA	NA
<b>Attributes</b>			
Wine involvement	Least involved with wine	More involved	Very involved with wine
Wine knowledge	Least knowledgeable	More knowledgeable	Very knowledgeable
<b>Behaviors</b>			
Shopping channel	Primarily grocery store	Warehouse (Costco) and Discount Store	All channels, including online and as wine tourist at wineries
Ecommerce and social media	Use wine apps for coupons and to check prices	Moderately web savvy with some social media wine usage	Very web savvy, buy online and use social media to discuss wine and gather information

## 6. Discussion

### 6.1. Research implications

This study supports previous research showing that high frequency (heavy-user) consumers are highly involved with wine and interested in learning more about it. They are more knowledgeable and enjoy wine. It also illustrates that the High Spender HF consumer enjoys drinking a wider selection of varietals.

More importantly this research introduces the HF price segmentation concept. This is important, especially to wine as a category, because there are so many price segments, ranging from jug/box wine to luxury tiers. Understanding differences in demographics, attributes, and behaviors based on preferred price purchase points is important to wine marketers in developing promotions to target each segment. For example, this research shows that the Low Spender HF consumer is very price conscious and will take the time to search for discounted wines and sales.

### 6.2. Wine marketing implications

There are several important wine marketing implications based on this study. The first is that it is important for marketers to pay attention to all three segments, because all include high frequency consumers. However, it is important to understand the differences in attributes and behaviors in order to create customized promotions to match consumer needs.

For example, the High Spender is much more interested in a wider selection of varietals, so this should be provided and emphasized. Marketers should increase offerings of varietals at higher prices points. Whereas the Moderate Spender is looking for a moderate priced wine that is consistent in style and taste. This is an important distinction, because this type of consumer is not looking for vintage variation, but prefers reliable quality, and it is important for marketers to emphasize this fact in advertising. The Low Spender, on the other hand, is interested in discounts and wine that is a good value. Paying attention to

this need and creating impactful promotions to attract the Low Spender is important. Marketers need to adjust to these differences and create unique messaging to reach each segment.

Finally, all three HF segments allocate more of the wine purchases to different channels, but interestingly all three use wine apps and social media. However the low spender uses wine apps to find coupons for grocery stores, whereas the Moderate and High Spender use social media for information and perhaps to communicate with friends in their social media networks. Marketers can create promotions, coupons, and advertisements for online, apps, and social media sites to match these needs.

## 7. Limitations and future research

There are several limitations to this study, as well as opportunities for future research. One limitation is that the sample is based on panel data and may not represent of all US consumers. To overcome this, future research could replicate the study with a larger sample size, and also analyze regional differences in the US.

A second limitation is that the survey asked respondents to list the amount of money they typically spend on a bottle, but consumers may spend more or less based on the occasion. Therefore, future research could examine the influence of the situation where the wine is consumed. Another possibility is to look at consumers who are more likely to overlap categories compared to ones who shop primarily in one price category.

A third limitation is that the study is a snapshot of US consumers at one point in time. Future research could investigate how consumers' wine consumption and preferences change as they age. Furthermore, an examination of how market trends, as well as competition for other beer and spirit categories, influence each consumer segment could be launched.

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