ANALYZING THE US RETAIL WINE MARKET USING PRICE AND CONSUMER SEGMENTATION MODELS (REFEREED)

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Abstract

Globalization and other driving forces have dramatically altered the competitive landscape of the wine industry. Winery managers must understand how these changes can affect pricing and product strategies at the retail level. The objectives of this research effort are threefold. First, the traditional industry price segmentation model will be revised in order to incorporate current industry developments arising from these driving forces. Second, the revised price segmentation model will be used in conjunction with a consumer behavior segmentation model to analyze the US retail wine market. These two segmentation models are analytical frameworks that winery managers can use to identify market opportunities and to assist them in the formulation of their product and pricing strategies in the highly competitive US marketplace. Third, these two segmentation models will be also used to explore the industry ramifications from a hypothetical market scenario for 2008.

Introduction

The US wine industry is large, expanding, complex and highly fragmented in regard to competition and consumers alike. Tens of thousands of different brands from wine producing regions around the world compete at retail prices ranging from under $2 to over a thousand dollars. Moreover, US consumers run the gamut from tentative neophytes and occasional purchasers to devoted wine connoisseurs. To understand the strategic and competitive dynamics of the marketplace both product price points and buyer behavior patterns need to be studied. Two segmentation models that incorporate conceptual frameworks representing pricing and consumer behavior patterns will be used to analyze the current US retail wine marketplace. Moreover, a future scenario of the market will also be proffered.

A nine-point price segmentation model is presented that improves upon the traditional four or five-point models commonly used in trade and academic publications. This revised model includes three broad product "super" segments, each including three sub-categories with corresponding price points. Interviews with industry experts and executives suggest that these nine product price points and segment classifications more accurately reflect the retail US wine marketplace in 2005. In regard to segmentation and analysis of the US market by consumer behavior patterns, a model created by Moulton *et al* in 2001 will be applied and extended. While this research draws upon data and findings from over 25 different sources, the data predominately comes from four well-established contributors: Adams Beverage Group (2004), Gomberg-Fredrikson & Associates (2003), MKF Research (2004), and the Wine Institute (2004).

The US market is the focus of this paper because 1) it is one of the largest global wine markets, 2) it has experienced significant growth in recent years, 3) it has great potential for continued growth and 4) the US is both a major wine producer, as well as a key target market for importers from the Old and New World alike. Extensions of these segmentation models to retail wine markets in other countries is feasible, but beyond the scope of this research effort.

The objectives of this research effort are threefold. First, the traditional industry price segmentation model will be revised in order to incorporate current industry developments arising from globalization and other driving forces. This revised nine-point price segmentation model is better suited for firms, trade associations and industry experts in their efforts to collect and analyze retail wine data. Second, the revised price segmentation model will be used in conjunction with a consumer behavior segmentation model to analyze the US retail wine market with the most recent data available. These two segmentation models are analytical frameworks that winery managers can use to identify market opportunities and to assist them in the formulation of their product and pricing strategies in the highly competitive US marketplace. Third, the combination of these two segmentation models will be also used to construct a hypothetical market scenario for the US wine industry in 2008 based on projected consumer trends.

AVERAGE US CONSUMPTION AND PRICE TRENDS

The US market was third among all countries in total overall wine consumption, at 2.4 billion liters in 2001. As shown in Table 1, wine consumption has been increasing in recent years. However, the US per capita consumption was only 8.77 liters in 2001, ranking the US 34th in the world (Wine Institute, 2004). Table 1 shows that per capita consumption is on the rise, but at these rates, the US has decades before reaching the current per capita levels of countries with wine-focused cultures like France (60 liters/year) or Italy (52 liters/year). While several categories of wine exist such as table, coolers, sparkling, dessert and fortified, table wine accounts for about 80% of all wine products sold nationally (Adams Beverage Group, 2004). Other industry research shows table wine purchases totaled 2.1 billion liters, or a 89% share of all wine products sold in 2003 (Wine Institute, 2004). Although not in complete agreement, both sources show that table wines dominate wine sales, and this research will focus on this category.

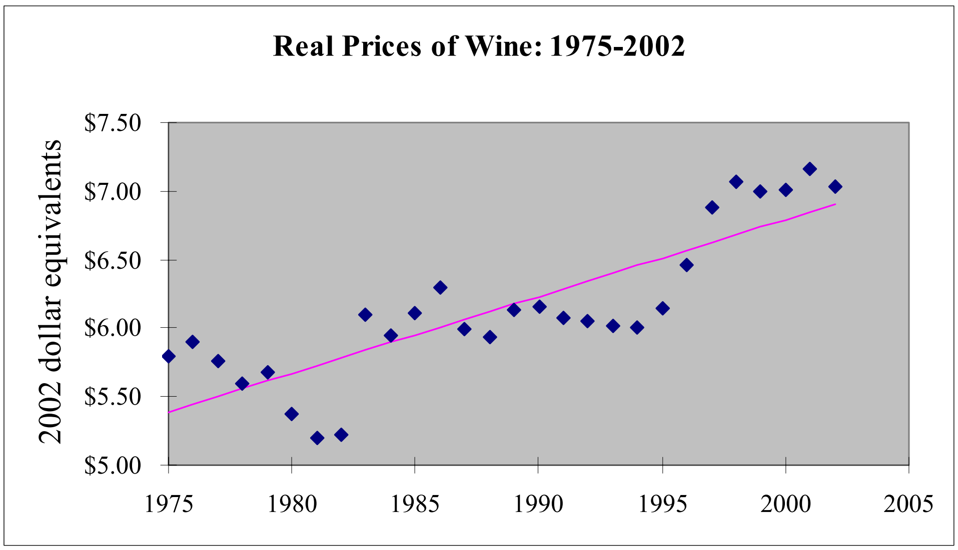
Table 1: US Wine Consumption, All Categories

Year	Total Consumption	Per Capita Consumption
1997	2.02 billion liters	7.33 liters/yr
1998	2.08	7.54
1999	2.36	8.58
2000	2.36	8.55
2001	2.42	8.77

Source: Wine Institute, 2004

Wine consumption can also be measured by revenue as well as volume. Figure 2 shows that, after adjusting nominal prices to account for inflation, real wine prices have slowly been rising over the past few decades. While wine prices in recent years have been relatively stable, averaging just over $7 per 750ml bottle equivalent, they are higher than the $6/bottle average experienced 15-20 years ago. This upward trend over time is strong, with a correlation of .83. While rising prices for some products might be attributed to scarcity, either natural or monopoly-induced, such is not the case with wine, which has thousands of producers and has been in oversupply for much of recent history (Cholette, Castaldi and Fredrick, 2005). Thus, price increases may be attributed to consumer willingness to purchase more expensive wines. However, recent industry developments suggest consumers have become more price-sensitive since 2002, shifting to less costly wines.

Figure 2 – Gentrification of US Wine Consumption: Inflation-Adjusted Prices



Source: Cholette, 2004

PRICE SEGMENTATION OF THE US RETAIL MARKET

As wine is a highly differentiated product with a wide range of price points, a look at industry averages for per capita consumption levels or revenue per unit is not as useful as it might be for more commoditized consumer products, like soft drinks. Thus price segmentation is generally used by the industry to see which price-points are growing in sales and which are declining. Past studies have divided the market for table wine into anywhere from four to six different price points and segments. Examples of these segmentation schemes are shown in Tables 3 and 4, with additional data on segment volume, revenue and changes.

Table 3: A Traditional Market Segmentation by Volume, Revenue and Growth

Market Segment	Retail Price: per 750ml	Percent Total Volume	Percent Total Revenue	Sales Growth

				2000 vs. 1999
Jug Wines	Up to $3	44%	17%	- 4%
Popular Premium	$3-$7	33%	31%	+ 3%
Mid-Premiums	$7-$10	16% for both categories combined	27% for both categories combined	+ 22%
Super-Premium	$10-$14			+ 23%
Luxury	Over $15	7%	25%	+18%

Sources: Silverman, Castaldi *et al*, 2002

Hay, 2001

Table 4: 2002 California Wine Shipments as Classified by Traditional Segments

Retail Price per Bottle (750ml equivalent)	**Price Segment**	**9 Liter Cases Sold (Millions)**	**% Change**	**% of Total**	**Winery Sales Revenue (Millions)**	**% of Total**
Over $14	Ultra Premium	15.8	6%	11%	2,210	33%
$7 to $14	Super Premium	28.6	8%	19%	1,900	29%
$7 & over	*Subtotal: Premium*	*44.4*	*8%*	*30%*	*4,110*	*62%*
$3 to $7	Fighting varietals	52.8	3%	35%	1,730	26%
Below $3	Jug Wine	52.6	0%	35%	780	12%
Up to $7	*Subtotal: Everyday*	*105.4*	*1%*	*70%*	*2,510*	*38%*
	Total Table Wine	**149.8**	**3%**	**100%**	**6620**	**100%**

Source: Gomberg-Fredikson & Associates, 2003

As the wine industry has grown and become more global it is important to revisit and rethink the traditional price point segmentation models. Table 5 proposes a revised model with nine price segments that more accurately depict the current wine retail market in the US. Discussions with industry executives and experts, as well as an analysis of trade and academic literature, suggest that the traditional price ranges do not reflect the current strategic and competitive dynamics of the US retail marketplace. The revised price segmentation model includes four augmentations: 1) a reclassification and breakdown of the luxury wine segment, 2) a division of the $3-and-under segment by factors other than price, 3) subdividing the popular $7 to $14 price range, and 4) grouping the nine category price points into three "super" segments.

Table 5: Revised Price Segmentation Model

Segment	**Price Range (per 750ml)**
Luxury Super Segment	
Icon	over $100
Super Luxury	$50 to $100
Luxury	$25 to $50
Premium Super Segment	
Ultra Premium	$14 to $25
Mid-Premium	$10 to $14
Popular Premium	$7 to $10
Everyday Super Segment	
Fighting Varietals	$3 up to $7
Extreme Value	Below $3
Jug Wine*	Below $3

Source: Fredricks, 2004

* Jug Wine refers to wines packaged in 3L jugs or 5L boxes

Augmentation 1: Redefining Luxury within the Gentrifying Wine Market

Even casual observers of the wine market will notice prices on many existing brands, especially from Californian wineries, have migrated upwards in recent years. A $15 wine is no longer perceived as a luxury, or at least is not a comparable splurge to a $75 bottle. Supporting evidence can be found in Table 6, which tallies all Cabernet Sauvignon offerings from the online retail site of Beverages and More ™ (Bevmo). Bevmo is not positioned to the consumer as a luxury wine shop, yet over half of their products for this varietal retail for more than $14. Thus, one suggested revision of the traditional segmentation classification would be to remove the $14 to $25 wines from the luxury segment and further divide wines over $25 into three price segments: Luxury $25 to $50, Super Luxury, $50 to $100, and Icon, at over $100.

Table 6: Revised Price Segmentation Model with Retail Store Data

Segment	Price Range (per 750ml)	Cabernet Sauvignon at Beverages and More™ Number of Products	Cabernet Sauvignon at Beverages and More™ % of Offerings	Cabernet Sauvignon at K&L Wines Number of Products	Cabernet Sauvignon at K&L Wines % of Offerings
Luxury Super Segment					
Icon	over $100	6	2%	152	33%
Super Luxury	$50 to $100	21	7%	148	32%
Luxury	$25 to $50	64	21%	94	20%
Premium Super Segment					
Ultra Premium	$14 to $25	68	22%	42	9%
Mid-Premium	$10 to $14	48	15%	15	3%
Popular Premium	$7 to $10	64	21%	13	3%
Everyday Super Segment					
Fighting Varietals	$3 up to $7	34	11%	3	1%
Extreme Value	Below $3	3	1%	0	0%
Jug Wine	Below $3	2	1%	0	0%

Source: Product data from www.bevmo.com and www.klwines.com, accessed 1/15/2005

Further analysis of the Cabernet Sauvignons sold at BevMo shows that 30% of the product offerings are over $25, but the bulk of these wines fall within the lowest of class ($25 to $50) of the Luxury Super Segment, with only a few Icon (over $100) wines offered. This portfolio can be compared to that of K&L Wine Merchants, a San Francisco Bay Area store positioned as providing “the world’s best wines at the best prices.” Table 6 shows the majority (85%) of K&L’s Cabernet Sauvignons are over $25, with 33% having Icon status, the most highly populated category. A comparison of prices for brands available in both stores offer shows prices are similar, so the difference in offerings by price range represents a deliberate strategy to offer products corresponding to different price segments. For example, K&L does not sell Woodbridge, a popular “lifestyle” brand, nor does BevMo offer the Icon wine Opus One.

The proliferation of luxury wines is a relatively new phenomenon, with little available data on this market niche. Many wineries are interested in selling expensive wines as it allows for greater profitability and more freedom in creating high quality wines, as well as providing prestige that may even carry over to the winery's less expensive offerings. As shown in Table 3, wines priced over $14 represents a small volume (7%) of the total wine market, yet provide for high revenue (25% of total), because of the price commanded. California producers have delved further into higher priced wines; Table 4 shows Californian wine priced over $14 accounted for 11% of total sales by volume, but 33% by revenue. The downside of offering high priced wines is that distribution channels are limited and consumption may drop in economic downturns, such as occurred in 2002. According to the 2004 Luxury Wine conference, sales in 2003 have partially recovered (Heeger, 2004). But this research will suggest that concentrating solely on wines priced over $14 may not be a good long term strategy for winemakers attempting to increase revenue.

Augmentation 2: The Emergence of Extreme Value Wines

The Jug Wine segment includes wines that retail at price points under $3 per bottle per 750ml equivalent. Traditionally, this price-point has been dominated by products in large packages, such as 3 liter jugs and 5 liter boxes, with the many of the wines blended to be smooth and inoffensive, such as Peter Vella Burgundy and Almaden Blush Chablis, both owned by Gallo. While these wines were popular a few decades ago, this segment appears to have matured. According to Table 4, it experienced the least growth in the 2000-2002 timeframe. In fact, Table 3 shows that this was the only category that declined in growth in 2000. This desertion from what was once a popular segment has likely contributed to the rising real price of wine shown in Figure 2.

However, the grape glut of recent years has made possible the introduction of Extreme Value wines: varietal wines that retailed for $3 a bottle or less. The most famous of these is Charles Shaw, better known as "Two-Buck Chuck." Bronco, the producer, sells five varietals through Trader Joe's at $1.99 per 750ml bottle in California. Nonexistent before 2002, this brand was responsible for 15% of California's retail wine sales by volume in 2003 (Economist, 2003). US Consumers purchased 6.8 million cases of Extreme Value wines that year (Wine Institute, 2004). The 2004 UC Davis survey of producers and experts predicts that this segment will wane in importance in the future, serving only as an outlet for local overproduction of bulk wine (Smiley, 2004). Yet other experts are equally convinced these wines will remain a permanent fixture. In either case, this segment merits its own niche, separate from the mature Jug Wine category.

Table 6 shows that K&L offers no Cabernet Sauvignons at this price point while Bevmo has a few products under $3. Three of these are the traditional jug offerings, but one is Pacific Peak, their private label equivalent to Charles Shaw, sourced through Golden State Vintners (Wine Business Online, 2003). Other retailers have similar private label Extreme Value wines, such as Safeway's Sea Ridge, also sourced from Bronco.

No changes to the $3 to $7 category, known either as "Popular Premium" wine or "Fighting Varietals," is needed as it still reflects a distinct market segment. Table 6 shows that Bevmo lists 35 different Cabernet Sauvignons in this range, while K&L provides a mere 3 offerings. Although Bevmo's selection is small compared with other categories, accounting for only 11% of the offerings, many of these are high-volume brands, such as Woodbridge, and likely account for a greater percentage of the store's sales than the product variety would suggest. According to Table 3, the $3 to $7 wines accounted for the most revenue in 2000, although little (3%) sales growth occurred. Table 4 shows the $3 to $7 wines accounted for 35% of all Californian wine sold in 2002, generating 26% of the total sales revenue. Expert opinion is that the recent popularity of Extreme Value (under $3) wines has cannibalized sales in this price range. However, others (Fuller, 2004) predict that wines price around $5 will experience the most growth in the future, accounting for up to half of all wines sold in 2007. The $3 to $7 price range is also the one that has the most appeal for younger consumers (Edwards, 2005). Clearly, "Fighting Varietals" is an important category to monitor.

Augmentation 3: The Subdivision of Premium Wines

The breakdown of the $7 to $14 price range into two categories, as suggested by Hay (2001), should be continued. Though spanning a mere $7 range, Table 6 shows this price point supports over a third of BevMo's Cabernet Sauvignons. Subdividing this price point and tracking consumer behavior and segment growth would help wineries determine if it is better to price above or below the $10 price point.

In recent years the $7 to $10 and $10 to $14 price categories achieved the highest growth in volume compared with all others. Growth was especially high in 2000 at 22% and 23% respectively (Table 3), corresponding to a surge in demand for more expensive wines in the late nineties (Carlton, 2000). Yet even in 2002, a time of less economic prosperity, wines in the $7 to $14 range experienced strong (8%) growth and accounted for 29% of California winery sales in 2002 (Table 4).

By breaking the category into Mid-Premium ($10 to $14) and Popular Premium ($7 to $10), Table 6 shows BevMo offers slightly more (64) of the latter than the former (48), but these categories have a strong presence in both retail outlets. Even a high-end purveyor like K&L Wine Merchants offers a few Cabernet Sauvignons in both these tiers, suggesting these are two price categories that few retail establishments are willing to concede.

Augmentation 4: Grouping by Three Super Categories

It may also be useful to look at the two broader groups in which the original four segments are divided in Table 4. The first group, Premium wines, includes all wines priced above $7, as opposed to the Everyday wines of the second group. This two-group division pre-dates the Fall 2004 proposed restructuring of Mondavi into “Lifestyle” and “Luxury” brands, leading to the attempted sale of the latter, forestalled only by Constellation’s buyout. Lifestyle brands, those retailing for under $15 per bottle, represented 86% of case sales and 77% of revenue for Mondavi (Franson, 2004). Table 4 shows that the premium wine category accounted for 30% of the case volume sold in 2002 yet made up 62% of the total sales revenue.

Table 5 suggests a different arrangement, with three super groups in place of two. Luxury wines include the three categories of all wines priced above $25. Premium Super Segment wines include all wines priced from $7 to $25. Everyday Super Segment wines would continue to include wines priced below $7. A brief look at two wine retailers supports this super grouping. Table 6 shows that BevMo, a mid-tier retailer, provides wines in all these categories, but the majority (58%) falls within the Premium Super Segment. K&L clearly has a different product offering strategy; 85% of their wines cost more than $25, and only 1% would fall into Everyday Super Segment wines. The super category where both merchants effectively compete is the Premium Super Segment.

SEGMENTING THE MARKET BY CONSUMER TYPE

While price point segmentation offers a basic way of understanding the wine market, it simply segments the product market, not the consumer market. Thus it does not constitute pure market segmentation. That is, use of price points does not satisfy the basic purpose of segmentation because understanding consumer needs and motivation is the first step in effective market segmentation. According to Kotler (2003), "a market segment consists of a group of customers who share a similar set of wants."

As seen in Table 1, American wine consumption per capita has been steadily rising in recent years and was 8.8 liters/year in 2001. However, the distribution of this consumption is very uneven, with about 10% of adults making almost 90% of wine purchases (Himelstein, 2002). Therefore the need for understanding the difference in consumers' purchasing behavior is crucial for vintners. Thus, it is appropriate and important to segment the market by consumer type, as well as by price.

Table 7 presents prior market research on such a behavioral segmentation model. The most obvious fact is that many Americans (42.5%) are non-drinkers, and the dominant segment (46%) is that of *Marginal Drinkers*, those who consume wine only on special occasions. The remaining 11.5% are core wine drinkers, classified as *Connoisseurs, Aspirants, Newcomers* and *Simple Wine Drinkers* who consume almost 90% of all wine.

Using US census data to estimate the number of Americans of drinking age in 2003 at 203.5 million, then applying the percentages given in Table 7, yields a population of 23.4 million core drinkers. Although the number of core drinkers has been increasing, this estimate differs some from another survey, which estimated there were 19.2 million core drinkers in 2000 (Anthony, 2001). Given the three year difference in the data, these figures are within tolerance for building a basic model, and both pale in comparison to the magnitude of the nearly 94 million *Marginal Drinkers*.

Not unexpectedly, the number of consumers in the highest-end bracket, *Connoisseurs*, is the smallest by population. However, this is a lucrative clientele with expensive and frequent purchases, and this class is intensively courted by purveyors of luxury wines as well as other vendors, such as providers of wine storage cabinets. But even retailers like K&L, who cater primarily to this and the *Aspirant* segments, also offer a few wines in the Popular Premium ($7 to $10) and Fighting Varietals ($3 to $7) price segments.

Aspirants represent the step below *Connoisseurs* in terms of expected price points, but they comprise a much larger (10 million) consumer base and purchase wines from a variety of price points. Almost equally large are the *Newcomers*, representing a group that sticks with known brands, like Woodbridge, in the Everyday Super Segment. Lastly, the *Simple Wine Drinkers* are described primarily as immigrants or first generation Americans who view wine as a pleasant, yet simple staple. Wine is a frequent purchase, but merits little attention or expense. It seems reasonable to assume their purchases remain in the Everyday Super Segment, especially with old favorites in the Jug Wine (under $3) category.

Although these categories may not have homogenous demographics, the segments hinge upon a behavioral, rather than demographic classification scheme. While harder to identify in surveys and other market research, Ciepicki et al, (1998) note that behavioral segmentation has superior predictive power to simple demographic segmentation.

Table 7: Characterization and Prevalence of the Types of US Wine Consumers

Type	**Behavioral Description**	**% of US population**	**% of core drinkers**
Non-Drinkers	Between 40-45% of American adults do not consume alcohol of any kind	42.5%	NA
Marginal Drinkers	Drink wine occasionally, but if they drink regularly, choose beer or liquor	46%	NA
Connoisseurs	Are knowledgeable and are comfortable with purchasing expensive wines	0.6%	5%
Aspirants	Have mastered wine basics but would like to learn more and are willing to try new brands and varietals	5.2%	45%

Newcomers	Enjoy wine, but are not yet comfortable with experimenting. Tend to stick with known brands at lower price points	4.0%	35%
Simple Wine Drinkers	Take little interest in learning more about wine. Are predominantly elders from traditional wine-drinking countries	1.7%	15%

Source: Moulton et al, 2001

It would be unrealistic to assume that all *Newcomers* become *Aspirants*, or *Aspirants* become *Connoisseurs*. Marketing experts (Miller, 2001) have shown that it is not inevitable that consumers will progress through all price points. Yet it seems likely some generalizations can be made. For instance, most wine drinkers, especially those lacking a family tradition of wine consumption, would start as *Newcomers*. It would also seem likely that few *Connoisseurs* or *Aspirants* morph into the *Newcomer*s.

Assigning a single price point to each consumer segment, such as stating that *Newcomers* consume only Fighting Varietals ($3 to $7) and *Connoisseurs* deign to purchase only luxury wines would be tempting. However, this simplification is likely to be highly misleading. A 2003 survey conducted by UC Davis showed that 78% of wine consumers stated that they are consuming lower priced wines compared to 13% in 2001, a trend that likely cuts across all consumer segments. As consumers gain more experience, they may not necessarily purchase more expensive wine. Indeed, one of the advantages of knowledge is the ability to spot a bargain and the confidence to experiment – or at least resist the pitch that a wine must be good because it is costly. Experts agree that all US wine drinkers are becoming more adventurous in trying new wines, especially lower-priced imports.

An Australian marketing survey that computed average price points for different consumer classes shows surprisingly little differentiation between diverse segments (Johnson, 2003), at most a 23% decrease from the highest average purchase price. Finally, each consumer purchases wine for a variety of occasions, and it should not be expected that every purchase will at the same price point. Wines intended as gifts, to be served for company or for special occasions are likely to be more expensive than bottles bought for everyday consumption. Thus assigning a consumer class to a single price niche would be unrealistic, and it would be better to assume a ratio of price points per consumer segment.

Additionally, assuming that once identified, the percentages of consumers in each niche will remain constant, or even that these numbers are still valid for the 2004-2005 time frame given recent market developments may be naïve. For example, the age cohort with the highest rate of wine consumption is that of people aged 39 to 55 (Smiley, 2004). That age group will continue to expand nationally both in relative percentage and absolute numbers for the next decade. However, it should not be assumed that wine's appeal remains static in time across all age groups. While experts attributed much of the growth in US consumption in the late nineties and early 2000's to core consumers imbibing more (Himelstein, 2002), recent developments such as 1) the appearance of Extreme Value (under $3) wines, 2) the increased evidence of the health benefits from moderate wine consumption and associated removal of wine's aura of vice, and 3) the publicity wine has recently received in the media suggest that wine is gaining new converts, and not just from within traditional demographic profiles. Recent surveys show the youngest possible consumer cohort (aged 21-27) has dramatically increased and may be responsible for up to 40% of recent growth in per capita consumption (MFK, 2004).

One such source of growth is from a substitution effect. Since the late 1990's Americans have been switching away from beer (Edwards, 2005) to other alcoholic drinks. As beer is the predominant alcoholic beverage of choice for Americans, with per-capita consumption at 85 liters/year (Beer Institute, 2004), one way to expand the wine market is to convince *Marginal Drinkers* to make wine part of their daily lives. For example, if 20% of national beer consumption was replaced by wine with 5 ounces of wine consumed for every 12 ounces of beer forgone, the US wine market would grow by 2 billion liters, nearly doubling in size.

A MODEL FOR MARKET SEGMENTATION AND GROWTH

This section presents a spreadsheet model of the US wine market that breaks down sales volume by price point. The model also includes consumer type segments and interactions with price points. By projecting growth and migration between consumer segments, the model can predict changes in consumer demographics and, by extension, sales volume and revenue across all price points. The model is first presented and benchmarked against 2003 data. A hypothetical growth scenario for 2008 is then proffered.

Modeling the 2003 Wine Market

Total population of segments can be estimated given consumer segmentation percentages provided by Moulton *et al* (2001) and census data for the population over the drinking age. Yearly future growth calculations assume a 1% annual population increase, as has occurred in recent years. Accounting for shifting age demographics over time is left for future research. Thus, the number of Americans of drinking age in 2003 is estimated at 203.5 million, as shown in Table 8. *Connoisseurs* are calculated to number about 1.2 million, under the 2 million projected by MFK Research.

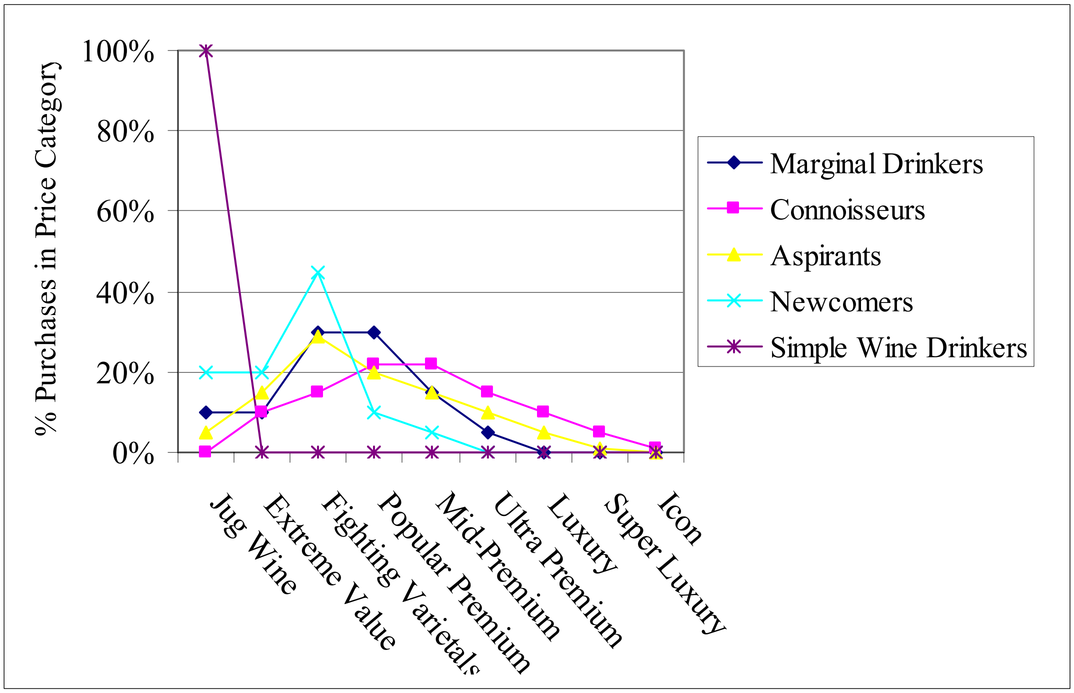
Table 8: US Table Wine Market: Consumption Levels by Segment

Consumer Segment	**% of population**	**Population of Segment (millions)**	**Per Capita Consumptio n (liters)**	**Total Segment Consumption (million liters)**
Non-Drinkers	42.5%	86.5	0	0
Marginal Drinkers	46.0%	93.6	2.3	212.7
Connoisseurs	0.6%	1.2	81.8	99.9
Aspirants	5.2%	10.6	81.8	865.7
Newcomers	4.0%	8.1	81.8	665.9
Simple Wine Drinkers	1.7%	3.5	81.8	283.0
Total Possible Consumers:		203.5		2,127.3

The 2003 estimate for table wine consumption is 2.127 billion liters (Adams Beverage Group, 2004). Using Himmelstein's (2002) estimate that core wine consumers are responsible for 90% of all wine purchases, their per capita consumption can be estimated to be 81.8 liters/year, the equivalent of 1.2 bottles of wine per week. *Marginal Drinkers* are responsible for the other 10% of wine purchases, and given the large membership in this group, this translates to their per capita consumption of 2.3 liters of wine a year. Research shows that there may be some variation in consumption rates between segments of core Australian consumers, with some connoisseurs consuming 40% more than basic or social drinkers (Johnson 2003). As such data is not currently available for the US market, a uniform consumption rate across all core drinkers has been assumed. Table 8 shows the breakdown of total consumption by each consumer segment.

As previously discussed, it does not seem appropriate to assume that all consumer types stick within a single price point for all wine purchases. While it may be logical to suppose that *Simple Wine Drinkers* purchase from the Jug Wine (under $3) category, all other consumer segments are assumed to purchase across multiple price points. *Connoisseurs* and *Aspirants* are particularly likely to buy wines over a wide range of price points. Figure 9 presents an initial matching of a ratio of price points to each consumer segment. These ratios are not based on consumer surveys or other empirical evidence, but represent a conceptual attempt to incorporate the behavior patterns reported by Fuller (2005) and Smiley (2004), as well as explain the diversity of product prices in such niche retailers at K&L Wines. For example, *Connoisseurs* are assumed to purchase across all price points, save for the (under $3) Jug Wines, and they are the only class to purchase Icon (over $100) wines. But it is assumed that even *Connoisseurs* cannot afford to drink wines from the Luxury Super Segment everyday, resulting in the highest concentration of purchases in the Popular Premium ($7 to $10) and Mid-Premium($10 to $14) price points. In a similar vein, *Aspirants* are assumed to make purchases over a wide variety of segments as do *Connoisseurs*, though shifted downwards in price. *Newcomers*' purchases are concentrated in Fighting Varietals ($3 to $7), but they are assumed make some purchases of both higher and lower priced wines.

Figure 9: A Comparison of Consumer Profiles,
Estimated Percentage of Wine Purchased at Different Price Points



Given this projected breakdown of buying behavior by price point, the number of consumers in each segment and per capita consumption rates, the 2003 volume of wine sold in each price segment can be estimated. While these estimates are based on assumptions that have yet to be proven with market surveys or other methods, they are not out of line with prior data on per-category sales. Comparing results in Figure 10 with data from 2000 in Table 3 shows similar results: high end wines account for 7 to 8% of all sales by volume, and the lower priced wines gain progressively more share of the market. Also, this analysis shows 14% of the market by volume falls in the Extreme Value (under $3) category, consistent with what has been reported in the popular press.

Figure 10: Sales Volume by Price Segment, Subdivided by Consumer Type

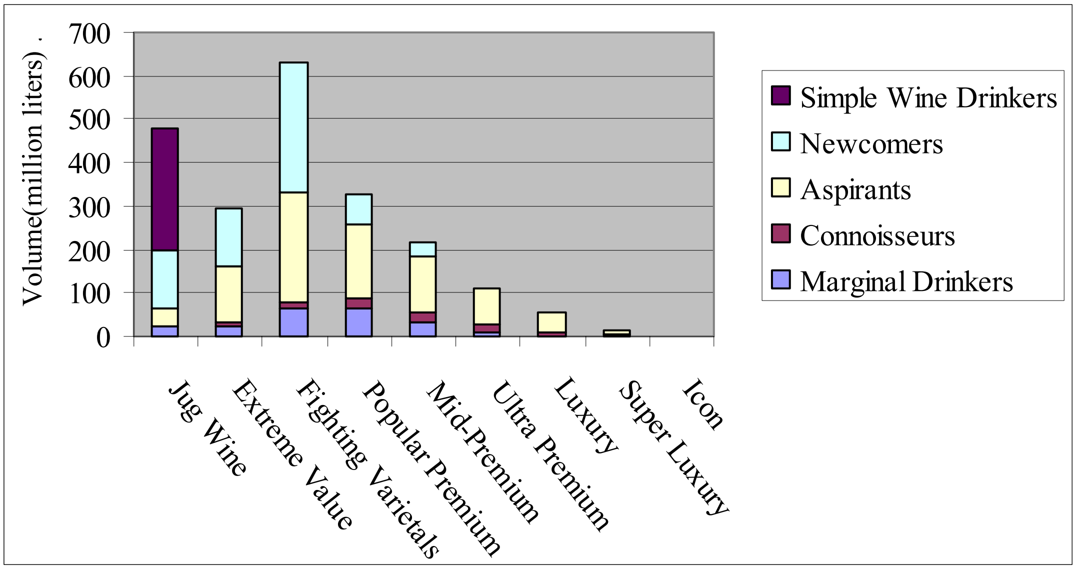
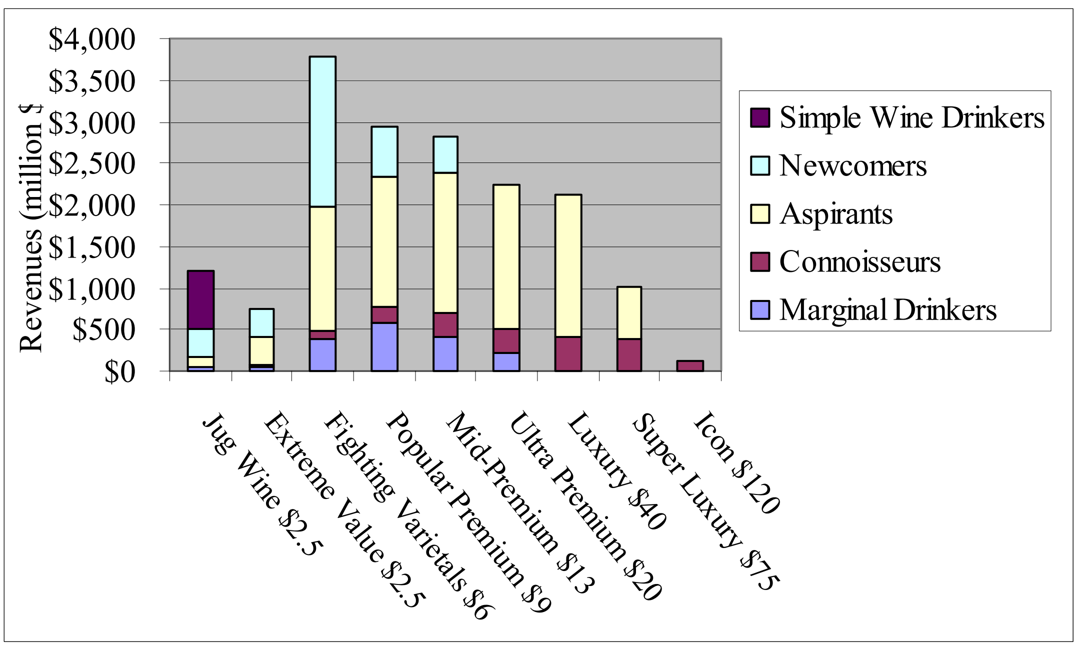


Figure 11: Revenue by Price Segment, Subdivided by Consumer Type



By assuming an average price point for each category of wine it is then possible to estimate revenue by price segment. Figures 10 and 11 show that *Aspirants* account for the most purchases in all price categories save for three: 1) the under $3 Jug Wines, the domain of the *Simple Wine Drinkers*, 2) Icon (over $100) wines, and 3) Fighting Varietals ($3 to $7), where *Newcomers* have a greater share. Assigning *Aspirants* to a single niche or using only the $10.74/bottle average price fails to capture this large consumer group's purchasing habits. *Connoisseurs*, although estimated to have large per-capita and per-bottle expenditures, as shown in Table 12, are too few in number to drive any price category, save for the upper end of the Luxury Super Segment.

Table 12 also presents the 2003 estimate for total table wine expenditures. This tally of $17 billion can be compared to existing data. For instance, given the Wine Institute's estimate of the size of the 2003 US market for all wine products at $21.6 billion, as well as the assumption that table wine's revenue share of the total wine market is the same its share by volume, 89% (Wine Institute, 2004), total 2003 revenue from table wines should be closer to $19.2 billion. Thus, the model seems to under predict the size of the market by a discrepancy of 12%. As this model is intended for conceptual purposes until more accurate data is available, the authors feel this difference is acceptable.

Table 12: Expenditure per Customer Segment

Customer Segment	Expenditures (millions)	Per Capita Expenditure	Average Price/ Bottle
Marginal Drinkers	$1,691	$18	$ 7.95
Connoisseurs	$1,792	$1,468	$ 17.94
Aspirants	$9,298	$879	$ 10.74
Newcomers	$3,496	$430	$ 5.25
Simple Wine Drinkers	$708	$205	$ 2.50
Total	$16,985		

Table 13: Comparing Volume and Revenue Market Shares from Prior Research

Retail Price per 750ml	Model Estimates for 2003 Sales: % total volume	Model Estimates for 2003 Sales: % total revenue	2000 US Sales, from Table 3: % total volume	2000 US Sales, from Table 3: % total revenue	2002 Sales of Californian Wine, from Table 4: % total volume	2002 Sales of Californian Wine, from Table 4: % total revenue
Up to $3	36%	11%	44%	17%	35%	12%
$3-$7	30%	22%	33%	31%	35%	26%

$7-$14	26%	34%	16%	27%	19%	29%
Over $15	8%	32%	7%	25%	11%	33%

When categories are aggregated to match previous price points, as per Table 13, the model's estimates also show similar patterns to prior results, if not absolute numeric agreement. Namely, cheaper price segments account for greater sales volume, but the percent of total revenue increases with each price point, as per-unit price dominates sales volume. Although from different years and data sources, it is interesting to juxtapose percentages from Tables 3 and 4, as the latter measures sales of California wine. From this comparison it can be seen that Californian wines command a greater share of the Premium market, and the average revenue per bottle are greater.

The Future of the US Wine Market: A High Growth Scenario

The model could then be used to show how the US wine market might appear in 2008. The wine market will be larger as overall population is assumed to grow at a 1% annual rate, but this scenario's key premise is that some *Non-Drinkers* and *Marginal Drinkers* will be converted into core consumers. No other migration between consumer segments is assumed, although all segments except *Marginal Drinkers* gain additional members, as seen in Table 14. All other parameters, such as per capita consumption by segment and buying behavior by price are unchanged from 2003 values. Monetary values are left in 2003 dollar equivalents, ignoring inflationary effects.

Table 14: Future Scenario: Growth and Migration Between Consumer Segments

Consumer Segment	% of population	Change from 2003	2008 Segment Population (millions)	Change from 2003 (millions)
Non-Drinkers	41.0%	-1.5%	87.7	1.2
Marginal Drinkers	37.0%	-9.0%	79.1	-14.5
Connoisseurs	0.6%	0.0%	1.3	0.1
Aspirants	5.2%	0.0%	11.1	0.5
Newcomers	14.5%	10.5%	31.0	22.9
Simple Wine Drinkers	1.7%	0.0%	3.6	0.2
Total Possible Consumers:			213.9	

By shifting 10.5% of the population from two non-core drinking segments to *Newcomers*, the overall wine market would grow in volume by 89% to over 4 billion liters, an extreme but interesting scenario to explore. Wines at all price points experience demand increases, but given the change in the composition of the consumer segments, not all price points experience the same growth. Figure 15 shows that the model projects that Fighting Varietals ($3 to $7) would experience the most growth, increasing by 138% in volume from 2003 levels. Assuming producers can still profitably produce the Extreme Value (under $3) wines, consumer behavior suggests that this segment will also continue to grow, mostly driven by *Newcomer* purchases. High-priced wines in the Ultra-Premium ($50 to $75) to Icon (over $100) segments grow by a mere 3% to 5% in volume.

Figure 15: Predicted Volume by Price Segment, 2003 verses 2008

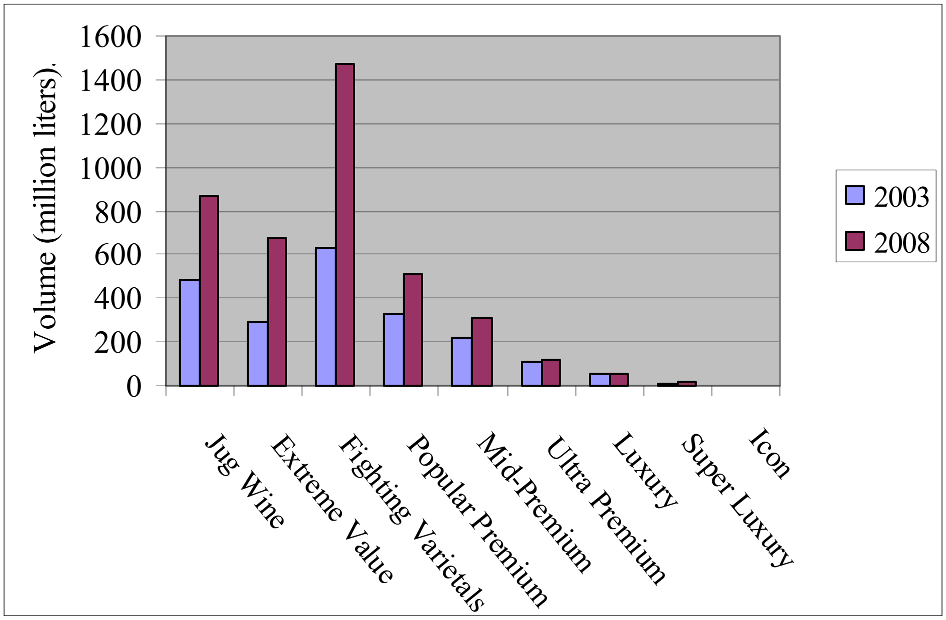


Figure 16: Predicted Revenue by Price Segment, 2003 verses 2008

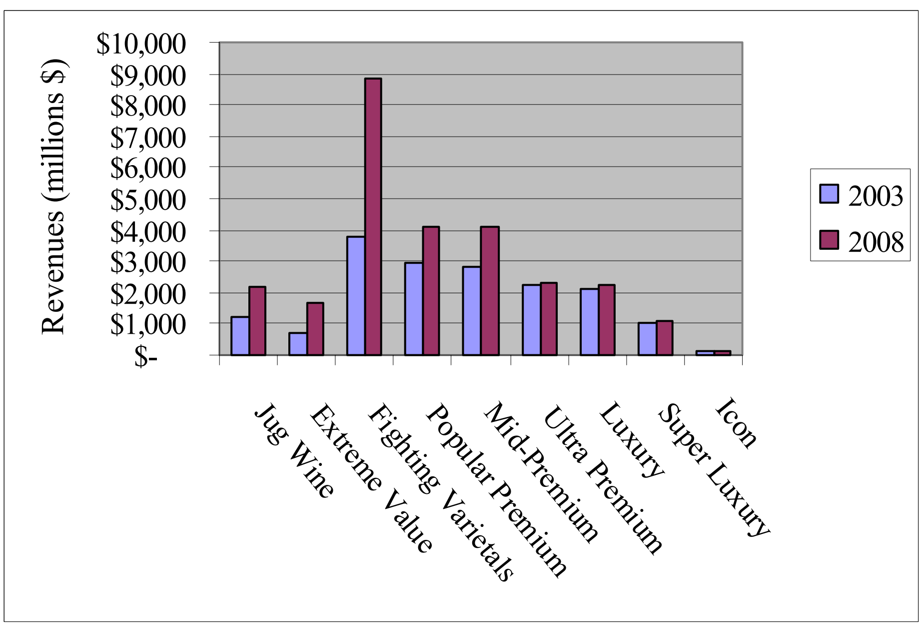


Table 16 shows that revenue increases over the five years for all price points. Because of the greater growth of lower priced wines, overall revenue is projected to grow only by 57%. Thus, the average price of wine would effectively drop 17% from $7.98 to $6.60 per bottle. This result runs counter to the long term price increases shown in Figure 2, but may accurately reflect changing demographics and market realities. While the Fighting Varietals ($3 to $7) gain $5 billion in revenue, Popular and Mid-Premium ($10 to $14) wines each gain over $1 billion. Thus, wineries looking to expand their market presence should consider actively targeting these price points. Given model assumptions, high priced segments will produce minimal additional revenue, less than a $238 million increase for all segments above $14 combined. These results run counter to the growth of luxury wines in the late 1990's. It would appear that the time is past for attempting to establish a luxury wine brand, other than for flagship purposes.

CONCLUSION: DISCUSSION AND FUTURE RESEARCH

The US wine market has undergone dramatic changes in the past few years and is far from achieving stasis. While future growth is inevitable, it will not be uniform across the wide range of price points and consumer types. Thus it is imperative that wine producers gain a better understanding of the evolving market dynamics and formulate their product offerings and pricing strategies to successfully grow their market shares and revenue.

Based on model results and expert opinions, the strongest changes are likely to result from the conversion of *Marginal Drinkers* to core wine consumers. It is likely these drinkers will enter as *Newcomers*, driving up the sales of wines in the Fighting Varietals ($3 to $7) and Popular Premium ($7 to $10) segments. In addition to providing more offerings at lower price points, savvy producers will attempt to entice more *Marginal Drinkers* by making wine more approachable with clear and catchy labels, use of screw caps and other alternate packaging. The recent purchase of Barefoot Cellars, a strong brand primarily priced within the Fighting Varietals ($3 to $7), shows that Gallo has anticipated this market need. Industry experts note that Gallo was looking for a youth-oriented brand (Norberg, 2005).

Many sources agree that consumers will continue to exhibit price sensitivity and engage in product experimentation. In particular, *Connoisseurs* and *Aspirants* are expected to continue trying new wines from a variety of price points and regions. Thus, the use of a single price point to represent the purchasing behavior of a consumer segment is overly simplistic. The model introduces the concept of consumer profiles, which can then be used to show how the growth in a consumer segment may translate to changing demands for wines in each of the nine different price segments.

Model projections show that the Fighting Varietals ($3 to $7), Popular Premium ($7 to $10) and Mid-Premium ($10 to $14) niches experience the greatest increase in revenue, over $1 billion within each niche. These results for this group of $3 to $10 wines have been corroborated by opinions of experts (Fuller, 2004). While many Californian producers feel they have ceded this price range to other New World exporters (Smiley, 2004), those that wish to grow their revenue should consider maintaining strategic presence here. Competition will be fierce, as New World imports, primarily from Australia, currently claim a 51% share of all wines sold through US supermarkets at $6 to $9 per bottle (Fujii, 2005). Difficult as this battle will be, it makes marketing sense to fight it now as there would seem to be little business opportunity in investing in the higher price segments solely for increasing revenue.

The major contributions of this research effort are the revision and improvement of the existing price segment model and an introduction of a conceptual model that maps purchasing behavior across consumer segments to these revised price points. Although data from many sources was utilized to benchmark the model for 2003 results, the very newness of these contributions means it was difficult to obtain data to validate some of the model concepts. This lack of data will be addressed in future research efforts

An appropriate next step is to validate the nine segment price model. This effort could likely be managed through a partnership with analysts from firms like Gomberg-Fredikson & Associates to gain access to the existing Point of Sales (POS) sales, re-aggregate the date to correspond to the proposed segmentation scheme, and measure recent years' sales volume and growth each segment.

A challenging but important area of future research would be to validate the model's assumptions concerning consumer segments. It is important to determine whether this classification scheme is accurate and to better understand the behaviors of each segment. Questions include, but are not limited to, determining the population of each segment, the migration rates between each segment, and the per capita consumption by segment by both volume and price-segment. Research tools to assist with these investigations could include surveys to determine personal spending from self-reported behavior and as well as data-mining POS data from wine retailers. For instance, it could be informative to collect and then analyze several days worth of market-basket information from a retailer like K&L Wines, which would show a range of individual consumers' purchases over price points. The ideal study would tie self-reported consumer behavior with their purchases, so demographic information and additional purchase behavior history could be collected.

Many other avenues of exploration are possible. As previously mentioned, these consumer segments are inherently behavioral rather than demographic in classification. However, it may be worthwhile to investigate if these categories can be tied more closely to demographic information, as demographic information is much easier to collect, with less reliance on surveys. Additionally, as the existing market segmentation literature was reviewed, the question the use of user-based segmentation over occasion-based segmentation was raised. Although Dubow (1992) shows that the latter yields more useful information, it is also suggested that surveys can be designed to accommodate both these approaches and derive a map that translates user-based segmentation to occasion-based. Results from all these further investigations would help to clarifying market dynamics and improve the accuracy and believability of the model predictions.

In summary, price and consumer segmentation models are essential tools for winery managers to best plan product offerings and brand strategies. The revising of the traditional industry price segmentation model to include three "super" segments and nine price points provides winery strategy-makers and industry experts with a contemporary framework that incorporates the recent developments brought on by globalization and other industry driving forces. World wine markets are constantly evolving and producers positioned to develop brands in high growth segments will prosper at the expense of wineries that rely on outdated demographic information or expect to sell to a static marketplace. Developing, validating and then applying price and consumer segmentation models to understand these changes and formulate strategic decisions will be critical for succeeding in this changing and challenging marketplace.

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