

Looking Forward: Imagining the Market For California Wine in 2030

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Per capita consumption is increasing in the United States as the demographic make-up of wine drinkers is changing. Sales will be higher in 2030, but costs in California and increased branding of bulk imports mean a higher share of wine may come from imports.

In 2010, the United States was the largest wine market by value and set to overtake France in volume. Of the wine consumed by U.S. consumers, 30% came from outside the United States.

In 2009, according to Wine Institute figures, California supplied 61% of all wine sold in the United States and the U.S. market accounted for approximately 83% of California's total sales that year. Wines retailing for less than \$9.25 per liter (about \$7 per bottle) constituted 72% of the total market, with over 30% of the market retailing at under \$3.96 per liter. California exports were also relatively low value: of the approximately 378.5 million liters of California wine exported, roughly half was shipped in bulk with a value of just over \$1 a liter, while exported bottled wine averaged just over \$3 a liter. Much of this article, therefore, focuses on the large volume market for relatively low-priced wine. What might demand and supply be like in twenty years?

The Market for U.S. Wine in 2030

In 2030 the last of the Baby Boomers, a 77 million-strong cohort that has driven American marketing trends for the past 50 years, will turn 65. Their children, the so-called Millennials, a cohort of approximately 70 million that turned

21 after the start of the 21st century, will be well along in their careers and raising families. According to projections from the U.S. Census Bureau, the United States' population will grow by 20%, from approximately 310 million in 2010 to 373 million in 2030. The country will be more ethnically diverse and older. Almost 20% of the population will be over 65, as compared to 13% in 2010. The proportion of the population considered "white" will have shrunk from 66% to 57% and increased in actual number by 7 million, contributing just over 11% of the population increase. By contrast, other ethnic groups will increase their share: Asian-Americans will constitute 7% of the population compared to 5% in 2010; African-Americans will have grown slightly from 12% to 13%; and Hispanics are projected to grow to 23% of the population, an increase to 86 million from their current 50 million.

Wine consumed is a product of per capita consumption multiplied by population of drinking age. In 2010 there are approximately 220 million Americans of legal drinking age, and that number is expected to increase by almost 22% to 268 million, which would imply a market of about 2.97 billion liters of table wine—up from the current total of 2.45 billion liters in 2008. To refine this projection requires reviewing some history and some recent consumption patterns.

According to studies contracted by the Wine Market Council, in 2009 approximately 43% of adult Americans claim not to consume alcohol in any form. This level of abstinence has remained fairly constant at around 40% since 1994, when the Wine Market Council commissioned its first study. Compared with other developed countries, America's level of abstinence is

extraordinarily high. The World Health Organization's Global Status Report on Alcohol 2004 shows Germany with 5.1% abstinence, followed by France at 6.3%, the UK at 12%, and Japan at 13.5%. Canada, which is perhaps most similar to the United States, has one of the highest rates of abstinence at 22%, but that is still about half the rate of that of the United States. If, during the next two decades, abstinence dropped from 43% to even 30% of the adult population, an additional 27 million drinkers would be added to the market.

Of those Americans who say they consume some alcohol, slightly over half (30% of all adult Americans) consume wine. Americans who drink wine split roughly 50/50 between so-called "core" consumers—those Americans who consume at least one glass of wine per week—and the "marginal consumers" who consume less than one glass a wine of per week. According to the 2009 Wine Market Council survey, the core consumers are the key market for wine, responsible for 91% of all wine consumed. As in any population, core consumers are not a homogeneous group. Some drink only one glass of wine a week, while others consume wine daily. Collectively, core consumers are about 34 million in number and average 70 liters of wine per person per year (roughly one glass of wine per day). Clearly, core consumers are key to the U.S. wine market.

The ethnicity of current core consumers differs from that of the general population. Currently, Caucasians, which represent 66% of the general population (assuming that Hispanics are considered separate from Caucasians), account for 84% of core consumers. African-Americans account for approximately 5% of core consumption, but represent just over 12% of the

general population. Asian-Americans are 7% of core consumers while only 5% of the general population. Hispanics, at 59 million people, represent 16% of the United States' population, but are only 4% of core consumers.

Considering that the Hispanic population in the United States is expected to increase by over 70% in the next 20 years to 86 million, and is predicted to account for over 50% of the total population increase, it is clear that straight-line projections of total wine volume are suspect, and the nature of wine drinking among the Hispanic population must be taken into account. In 2006, the Wine Market Council contracted with Eperian-Simmons, a market research company, to study Hispanic consumers. Not surprisingly, they found that Hispanic wine consumers tended to have achieved higher levels of education and be professionally employed than were Hispanic non-wine consumers. About 23% of Hispanics in this 2005 survey drank wine as opposed to 34% of the general market; however, younger Hispanics, those under 40 years old, were a significantly larger portion of the Hispanic market for wine than were their age counterparts in the general market. In addition, they consumed about one more glass of wine a month than did their age counterparts in the general market. Hispanic wine drinkers also seem to be more acculturated than Hispanics that do not drink wine: 56% of Hispanic wine drinkers preferred to speak English as opposed to 41% of Hispanics who are not wine drinkers. Note, however, that approximately half of the increase in the number of Hispanics will come from immigration, and wine consumption among this group will continue to lag.

Millennials in all ethnic groups are adopting wine at a higher rate than did their parents, and ethnic composition is changing, so it seems likely that the share of abstainers will decline. If half the new consumers buy wine and that new group is split roughly in half

Group	Share in Core, 2010	Share in Core, 2030	Population, 2030	Core Consumers, 2030
	(Percent)		(Millions)	
Caucasian	13.9	16	212	33.9
African-American	4.3	4.5	48	2.2
Asian-American	14.8	16	27	4.3
Hispanic	3.2	8	86	6.8
Total				47.2

Source: Based on projections from U.S. Census and wine consumption survey data as described in the text. Note: The percent of core consumers are shares of the total population (including those under 21 years of age) since Bureau of Census projections broken out by both age group and ethnicity were not available.

between core and marginal consumers, then core consumers would grow to between 18–19% of the adult population and marginal consumers would account for 16%. If core consumers continue to account for 90% of total wine consumption and they remain at their current average of 70 liters, the total table wine market in 2030 would be 3.67 billion liters, or 0.54 to 0.63 billion liters higher than a straight-line projection based solely on population growth.

Of course, wine consumption has gone in and out of fashion in the United States. During the 1980s, per capita consumption of wine declined, but increased again in the 1990s. Lack of industry advertising, tougher laws designating lower blood alcohol levels for driving under the influence, government warning labels on alcoholic beverages, and a government-sponsored “war on drugs” have often been suggested as contributing to the decline in per capita consumption in the 1980s. But the 1980s was also the time when Baby Boomers were home with children—and studies have repeatedly shown that households with children have lower rates of wine consumption than do similar households with no children. In 2030, the older Millennials will be in their child-rearing years and it is possible that per capita consumption will again decline. That said, it seems more likely that wine consumption in the United States will converge gradually toward the norm in other developed nations.

Supply

Low-cost wines must come from inexpensive grapes, and most of California's production comes from the San Joaquin Valley. Crush districts 12, 13 and 14, which constitute the Central Valley south of the Delta to Bakersfield, produced 52% of all grapes crushed in 2009. District 13, which is composed of Fresno, Madera and Tulare counties, alone accounted for almost one-third of all of California's winegrape production.

A 2030 market of 3.67 billion liters of table wine means that the U.S. market would expand by 1.13 billion liters, requiring approximately 1.75 million tons of grapes. Assuming that California supplied 60% of that increase and that half of the volume retailed for under \$5, then the southern San Joaquin Valley would need to expand its production by about 500,000 tons, which would require an additional 42,000 acres at a yield of 12 tons per acre. Hence, using these estimates, unless yield were further increased, acreage in the San Joaquin Valley would need to expand by about 30% to satisfy this additional demand.

The recent trend in winegrape acreage in the region is actually down not up. After reaching a peak of 182,000 acres in 2001, acreage fell to 150,000 in 2005 and further to 140,000 in 2009 for the San Joaquin Valley crush districts 12, 13 and 14. Table 2 shows some of what was behind the decline in winegrape acreage. For the seven valley counties that comprise the bulk of the acres for

lower-priced grapes, acreage of winegrapes fell by about 11,000 acres from 2005 to 2009 while acreage of tree nuts, especially almonds and pistachios, rose.

Table 3 indicates some of the economics behind these acreage shifts. The data presented are derived from cost studies prepared under the direction of Karen Klonsky by the Cooperative Extension staff at UC Davis and in the region. Each column shows information for the most recent cost study for each crop in the region. Comparing across the crops, we find that winegrapes had total revenue per acre for the “typical case” that was well below total costs. Table grapes also showed negative net revenue, while returns were strongly positive for the tree nuts.

Of course, there is considerable variation across specific locations and farms, and winegrape prices have risen above the \$200 per ton used in the 2005 study. Nonetheless, the basic message of Tables 1 and 2 are clear and consistent. In order to expand winegrape production for lower-priced wines, innovations are needed to expand yields per acre or otherwise lower costs of production. One positive factor for winegrapes is that average irrigation water use per acre is about 25–60% below that of other perennial crops.

Wine from grapes grown in the San Joaquin Valley is essentially an undifferentiated commodity in competition with similar wine produced around the world. California accounts for approximately 80% of the world’s production of almonds and 90% of almonds sold in the world export market. By contrast, California produces 7% of the world’s wine and only 4% of wine sold in export. The supply of inexpensive wine from other countries acts as a ceiling on prices for winegrape growers. This reality was brought home in 2009 when over 227 million liters of finished bulk wine, valued on average at \$0.69 per liter, were imported to the United States and bottled here.

As we consider the market for wine in 2030, it is useful to consider what resources are available as inputs to the additional production needed to supply the expanding market in the United States. Many believe that irrigation water will become scarcer and more expensive in California. Agricultural water prices vary from under \$10 per acre-foot in some locations to over \$100 an acre-foot (when available) in some districts on the west side of the San Joaquin Valley. Winegrapes require less water per acre or per unit of value than many other crops. This may suggest some advantage to a shift towards winegrapes over the next two decades.

However, growers in crush districts 13 and 14 do not yet seem to be planting new vineyards. Of the approximately 105,000 acres of winegrapes in the region, 93,000 acres were planted prior to 2001 and will have reached the end of their normal productive lifespan by 2030. With grape prices for inexpensive wines constrained by international competition and facing increased input costs, it seems likely that some winegrape growers in the San Joaquin Valley will turn to other crops when it comes time to replant their vineyards. Unless yields can expand substantially, that means either higher prices or a higher share of supplies of low-cost wines supplied from other regions of the world.

The Market for More Expensive Wines

This article has mainly focused on wine retailing at below \$7 a bottle, because such wine constitutes the major share of the U.S. market by volume. Because of the multiplicity of brands’ sales venues, it is difficult to track sales of expensive wines with precision and estimates of volume differ. But, by any measure, higher-priced wine is important to California. In 2008, industry analyst, Jon Fredrikson, estimated that the 12% of California wine that retailed at above \$14 a bottle earned roughly one-

Table 2. Acreage Change for Winegrapes and Alternative Crops¹

Crop	Change in Acreage 2005–2009
Winegrapes	-10,752
Almonds	128,183
Pistachios ²	28,852
Walnuts	1,838

¹ Central Valley south of San Joaquin County.
² Stanislaus does not report pistachios separately.
 Sources: CDEA. *Grape Crush Report*. 2010. California County Agricultural Commissioners’ Data. 2009.

third of wine revenue, as did the wines retailing between \$7–\$14 per bottle and wine retailing below \$7 a bottle.

Most analysts agree that sales of expensive wines have expanded rapidly over the past 20 years. This view is reflected in the increase in the number of wineries in California. Only a few wineries are large enough to have sufficient economies of scale to produce wine for the under \$7 a bottle market. Most California wineries are small and focused on producing expensive wines, and their number has increased by about 260 percent from 827 in 1991 to 2,972 in 2009.

Expensive wines require flavorful grapes, most of which are produced in California’s coastal valleys that are cooled by their proximity to the Pacific Ocean. Grapes grown in cooler areas tend to have higher levels of color, acidity, and flavor than do the same varieties grown in warmer areas, but they also have lower yields per acre. Grapes grown in areas such as Napa, Sonoma, or San Luis Obispo are significantly more expensive than the same varieties grown in California’s warm interior valley. In 2009 the average price of Cabernet Sauvignon from Napa County was \$4,619 per ton, compared to \$2,194 per ton in Sonoma County, and \$350 per ton in Fresno County (crush district 13).

The demand for expensive wines (and grapes) has fluctuated with the U.S. economy, but has generally increased over the past twenty years. In the almost two decades between 1991

and 2009, north coast acreage grew by 52% to 128,233 acres, Monterey acreage expanded by 58% to 44,894 acres, and the central coast area of San Luis Obispo and Santa Barbara counties increased by 160% to 47,872 acres. Environmental regulations have limited the amount of coastal land that could potentially be converted to vineyards, and areas such as Napa County may be essentially fully planted. Other coastal areas, although expensive to develop, remain available for vineyard expansion if demand for expensive California wine increases enough.

The dramatic increase in the number of small wineries has created both opportunities and problems for individual firms. The proliferation of wineries has allowed effective collective marketing of regions, varieties and wine types, resulting in greater consumer awareness of the fine wine category. The Napa Valley Vintners is perhaps the best example of regional marketing and most other grape-growing regions in California have attempted to duplicate Napa's efforts. While these activities have served to expand the market for expensive wine, the main problem for each firm remains competition in what seems to have become a saturated market.

There are few barriers to entry in the California wine business. Today, all that a would-be wine-brand owner needs is money. Expensive grapes from famous areas can be purchased, expertise hired, barrels leased, and winemaking outsourced through custom crush. Investments in vineyards, experience, and wineries are not necessary, although some owners do choose to establish their own vineyards or build their own processing facility. The result generally is technically-sound, highly-extracted, richly-textured wine, which often tastes very similar to other wines made in the same region and from the same variety. The proliferation of similar wines has flooded the U.S. distribution and retail system, forcing brand-owners to

Crop	Year of Study	Revenue	Total Cost	Net Returns
Winegrapes	2005	\$2400	\$2834	-\$434
Table grapes	2007	\$9600	\$9652	-\$52
Almonds*	2006	\$4000	\$3348	\$652
Walnuts*	2007	\$5100	\$4027	\$1073
Pistachios	2008	\$4536	\$3680	\$856

* Northern San Joaquin Valley
 Source: Cost and Return Studies. Agricultural and Resource Economics, UC Davis and University of California Cooperative Extension. <http://coststudies.ucdavis.edu/current.php>

limit volumes produced and to pursue direct sales whenever possible.

The supply of expensive wines has increased, and can continue to increase, but ultimately is constrained by demand. Demand for expensive wine seems to expand when the economy booms and contract during recessions, especially when asset prices, such as the stock market or real estate decline. During both the economic contraction following the dot.com bust and the most recent recession, quantities of every-day wine increased at roughly constant prices, while demand for upper-end wine faltered with prices discounted as inventories rose.

The vast majority of expensive California wine is sold within the United States, so this industry is tied to the fortunes of upper-income Americans. Of course, the other crucial factor for sales of California's fine wine is the perception of quality relative to imported wine that is also vying for the wine budget of the same small segment of high-income customers. For this, the fine wine industry must vigilantly attend to the quality of its wine and marketing efforts to maintain and enhance its reputation.

Conclusion

The U.S. wine market will look different in 2030. On the demand side, per capita consumption will increase as acculturated Hispanics adopt wine and as wine becomes a more integral part of the American culture. Increased per capita consumption combined with population growth could quite possibly

increase total table wine sales to 3.60 billion liters. California will remain the dominant producer within the United States, but it is likely to lose market to inexpensive bulk-wine imports. These wines are likely to be marketed as global brands, with the location of grape supply of little importance to consumers. This article has also discussed the supply and demand picture for higher priced wine for which location of production is a dominant marketing attribute. These wines, which are largely produced from coastal grapes, face quite different economic drivers on both the supply and demand sides of the market.

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For further information, the author recommends the following:

Sumner, D.A., H. Bombrun, J. M. Alston, and D. Heien, 2004. "North America," Ch.10 in *The World's Wine Markets: Globalization at Work*, edited by K.Anderson, London: Edward Elgar.

CDFR. Grape Crush Report. 2010. www.nass.usda.gov/Statistics_by_State/California/Publications/Grape_Crush/

California County Agricultural Commissioners' Data. 2009. www.nass.usda.gov/Statistics_by_State/California/Publications/AgComm/Detail/index.asp