# MKF RESEARCH

## THE IMPACT OF WINE, GRAPES AND GRAPE PRODUCTS ON THE AMERICAN ECONOMY 2007:

### FAMILY BUSINESSES BUILDING VALUE

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WINE INSTITUTE
THE VOICE FOR CALIFORNIA WINE

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The National Association of American Wineries

Winegrape Growers of America


MKF RESEARCH LLC

A joint venture of
Global Wine Partners US LLC
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# IMPACT OF WINE, GRAPES AND GRAPE PRODUCTS ON THE AMERICAN ECONOMY 2007

This report provides conservative estimates of the impact on the US economy of the wine, winegrape, raisin, grape juice, table grape and grape products segments of this industry for the calendar year ending 2005.

This study has been undertaken through the collaborative support of Wine America, the Wine Institute, Winegrape Growers of America and the National Grape and Wine Initiative plus the cooperation of the vintner and grower organizations in Illinois, New York, Pennsylvania, Tennessee, Texas and Virginia and the states of Missouri, North Carolina, and Michigan and Texas Tech University with the overall coordination of the New York Wine and Grape Foundation.

The methodology for this study is described on page 22 below.



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## FULL ECONOMIC IMPACT OF US WINE, GRAPES AND GRAPE PRODUCTS ON THE AMERICAN ECONOMY

## $ 162 Billion[1]

| | ECONOMIC IMPACT |
|---|---|
| Full-time Equivalent Jobs | 1.1 million |
| Wages Paid | $ 33 billion |
| Number of US Wineries[2] | 4929 |
| Number of Grape Growers | 23,856 |
| Grape Bearing Acres | 934,750 |
| US Winery FOB Revenue | $ 11.4 billion |
| Retail and Restaurant Share of Revenue from Sales of US Wine | $9.8 billion |
| Distributor Share of Revenue from Sales of US Wine | $2.7 billion |
| Grape Sales | $3.5 billion |
| Retail Value of Table Grape Sales | $3 billion |
| Retail Value of Raisin Sales | $560 million |
| Retail Value of Grape Juice and Juice Product Sales | $2.8 billion |
| Number of Wine-Related Tourist Visits | 27.3 million |
| Estimated Wine-Related Tourism Expenditures | $3 billion |
| Federal Taxes Paid | $9.1 billion |
| State and Local Taxes Paid[3] | $8 billion |

[1] See **Sum of Total Spending** on page 4.
[2] TTB: Number of Bonded Wineries in US, end 2005
[3] Underestimate as no data available on property taxes paid by wineries or vineyards.

**Table 1**
**Total Economic Impact (Sum of Total Spending) on Wine, Grapes and Grape Juice**

| | | |
|---|---|---|
| **Revenue:** | | |
| Winery Sales | $ | 11,372,366,000 |
| Retail and Restaurant Wine Sales | | 9,781,677,000 |
| Distributors Sales | | 2,667,730,000 |
| Tourism | | 3,010,259,000 |
| Farm Gate Value of Grapes | | 3,459,407,000 |
| Grape Juice Processor Sales | | 1,283,958,000 |
| Grape Juice Distribution | | 385,187,000 |
| Grape Juice Retail Sales | | 1,168,402,000 |
| Table Grape Retail Sales | | 2,156,661,000 |
| Federal Tax Revenues | | 9,090,229,000 |
| State Tax Revenues | | 7,979,598,000 |
| Vineyard Development (excluding vines) | | 1,868,648,000 |
| Glass Bottles | | 573,000,000 |
| Closures | | 104,000,000 |
| Wine Labels | | 184,696,000 |
| Boxes/Bags-in-a-Box | | 174,930,000 |
| Cooperage | | 121,221,000 |
| Stainless Steel Tanks | | 40,500,000 |
| Trucking and Warehousing | | 602,222,000 |
| Grapevine Assessments | | 6,090,000 |
| Grapevines/Nurseries | | 61,777,000 |
| Wine Labs and Consulting | | 11,000,000 |
| Charitable Contributions | | 128,726,000 |
| Advertising | | 80,621,000 |
| Winery Research and Education | | 31,206,000 |
| Financing Revenues | | 305,281,000 |
| Indirect (IMPLAN) | | 33,896,350,000 |
| Induced (IMPLAN) | | 38,578,358,000 |
| Total Revenue | $ | 129,124,100,000 |
| **Wages:** | | |
| Winery Employees | $ | 1,395,919,000 |
| Vineyard Employees | | 698,365,000 |
| Grape Juice Manufacturing | | 18,600,000 |
| Grape Juice Distribution | | 42,500,000 |
| Grape Juice Retail | | 115,238,000 |
| Raisin Industry | | 50,000,000 |
| Tourism | | 1,250,256,000 |
| Vineyard Development and Materials | | 390,242,000 |
| Bottling Supplies | | 208,828,000 |
| Winemaking Equipment, Supplies and Services | | 27,413,000 |
| Distributors Employees | | 1,064,575,000 |
| Retail/Liquor Stores - Wine Specific | | 1,204,735,000 |
| Restaurant Wages | | 3,064,811,000 |
| Trucking and Warehousing | | 312,300,000 |
| Grapevine Assessments | | 1,324,000 |
| Grapevines/Nurseries | | 19,903,000 |
| Advertising | | 8,064,000 |
| Education and Research | | 15,138,000 |
| Indirect (IMPLAN) | | 10,355,301,000 |
| Induced (IMPLAN) | | 12,658,554,000 |
| Total Wages | $ | 32,902,066,000 |
| **Total** | **$** | **162,026,166,000** |

# EXECUTIVE SUMMARY

Producing wine and growing grapes in the US – whether winegrapes, juice grapes, raisins or table grapes – is a family business, often a multi-generational business. Less than 30 thousand primarily small and family owned businesses, spread across all 50 states[4], have built an industry which now generates more than $162 billion in economic impact, as described in **Table 1,** and supports more than one million jobs.

Less tangible but equally important are the many contributions the industry makes in preserving agricultural land, revitalizing rural communities, supporting local charities, and enhancing the quality of life.

### *Growing Grapes in the US*

More than 23,000 farms grow grapes, 90% of which are smaller than 100 acres[5]. Overall, the US had 934,750 grape bearing acres in 2005, with a total crop value in excess of $3.5 billion, as shown in **Appendices III** and **IV**.

Grape production of all kinds has increased by 5% since 2003, with the total value of the crop rising by more than 15% in the same period, primarily through rising values for winegrapes and raisins.

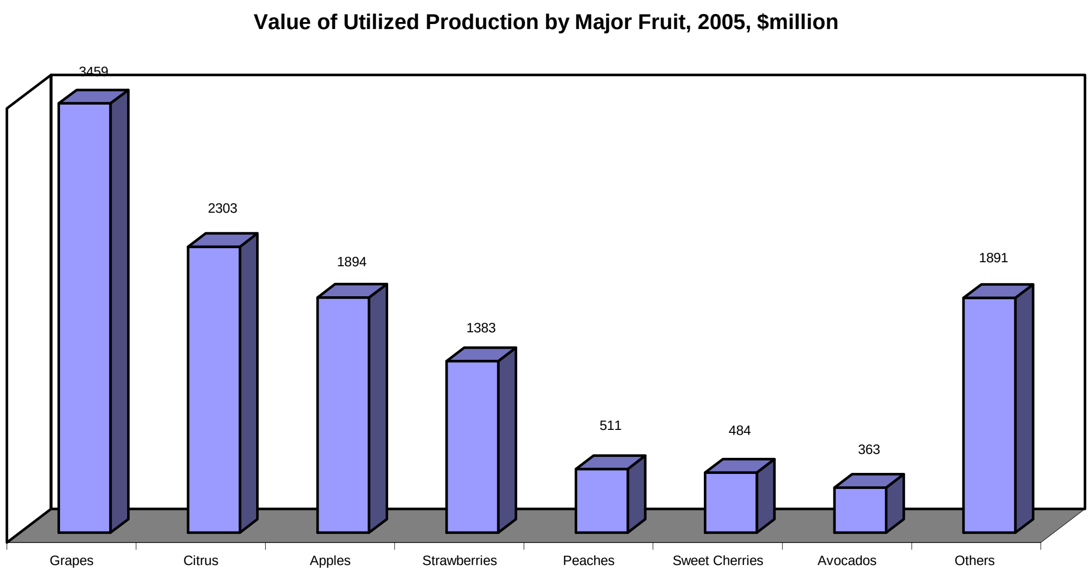
Grapes are the highest value fruit crop produced in the United States (**Table 2**) and the sixth highest value of all US crops (**Appendix V**).

- 2.3 million tons of raisins, representing 30% of total grape production, generated $560 million in retail value in 2005.
- 95.8 million 19-pound box equivalents of table grapes were shipped out of California with a value of $3 billion in 2005. Approximately 35% of the crop is shipped to export markets each year. Table grapes, 99% of which commercial crop is grown in California, represent about 11% of total grape production.
- 615,210 tons of juice grapes produced grape juice and grape juice products with a retail value of more than $2.8 billion in 2005. Juice grapes represent about 9% of total grape production.

[4] See **Appendix I**.
[5] See **Appendix II**.

Winegrapes, including *Vitis Vinifera*, the traditional European wine grape; labrusca, winegrapes native to the North American continent; and French hybrid grapes, provide the balance of US grape production.

**Table 2**




**Source: NASS**

As indicated in **Appendix IV,** California, Washington State, New York State, Michigan, Pennsylvania and Oregon are the leading producers of grapes and grape related products.

### *America's Winemaking Community*

The number of bonded wineries in the US has increased by 83% since 1999, from 2688 to 4929. Wineries can now be found in all fifty states. Total revenues from wine sales by US wineries now approach $11.4 billion, including $707 million in exports. Sales of US wine represented 73% of the total 2005 sales of wine in the US. The retail value of wine produced in the US in 2005 was $23.8 billion.

### *The Impact of the Grape and Wine Industry*

Together, production of wine, grapes, grape products and their related industries produced $162 billion of economic value to the American economy in 2005.

The large and growing economic impact of the grape and wine industry contrasts with the economic situation of many other American industries. Much of the country has experienced the sudden loss of economic impact when a large industrial complex, whether automobile or steel or even semiconductors and telecommunications, or a group of smaller enterprises, such as the garment and footwear industries, closes a factory. The impact of these actions comes not only from the direct loss of jobs but the loss of business for suppliers and the loss of spending power and tax bases in local communities. These are the "direct, indirect, and induced effects" of economic activity – in essence, the "ripple effect," which can be negative for an industry in decline or relocating and positive when an industry is growing. In the case of the wine industry, as this analysis shows, the ripple effects are very positive and spread across many sectors of the economy.

### *Revitalization of Rural Communities*

Wine, grapes, grape products and allied industries create employment and new market opportunities in rural communities. In areas that previously had diminishing farming of tobacco, cotton, prunes and other crops, the planting of grape vines and the creation of wineries is now offering the areas new life. Grape farming is providing employment as is the establishment of new wineries, shops and restaurants springing up in the footprint of the communities.

Grape growing and the establishment of wineries are helping to diversify local economies and keep land in agricultural production as some crops become less viable. For example, in North Carolina 1000 acres of vineyards and 44 new wineries have been established in the last decade as tobacco acreage has declined.

By their very nature, wine and grapes are long-term investments and long-term employers. Planting vineyards is an expensive commitment. Newly planted vineyards need up to four years to produce a harvest[6]. To produce wine from those grapes may require aging for up to an additional three years.

Not only are these long-term investments but they are inherently tied to "place": a particular location, soil, landscape and aspect. Unlike manufacturing or service enterprises, vineyards, once planted, cannot simply get up and move to another country which might offer cheaper labor, a better business climate or tax incentives.

Wine especially speaks of the soil and climate from which it is drawn. Whether from Michigan, California, New York, North Carolina or any of the other 46 states producing wine, wine speaks of its community and its history.

[6] Vinifera winegrapes do not produce a full crop until usually four years after planting. Certain other varieties may produce significant crops as early as the third year. Planting a grape vineyard may cost from $4,000 to $35,000 per acre depending on variety, region and planting pattern.

### *Employment*

Wine and grapes support a broad network of related industries, reflecting the high value added impact of these products. Wine and grapes and related industries account for more than 1 million jobs in the United States, for a payroll of almost $33 billion, as shown in **Table 3** below.

**Table 3**
**Total Employment 2005**
**Wine, Grapes, Grape Product and Related Sectors**

| | |
|---|---|
| Vineyards | 35,170 |
| Vineyard Contracted Services | 15,860 |
| Wineries | 33,560 |
| Juice Processing | 401 |
| Juice Distribution | 1,100 |
| Juice Retail | 5,961 |
| Raisin Industry | 2,500 |
| Tourism | 49,710 |
| Bottling Supplies | 4,640 |
| Winemaking Equipment, Supplies and Services | 531 |
| Vineyard Materials | 970 |
| Wine Distribution | 16,920 |
| Retail/Liquor Store | 62,318 |
| Restaurants | 272,670 |
| Trucking and Warehousing | 10,050 |
| Grapevine Assessments | 22 |
| Grapevines/Nurseries | 1,050 |
| Advertising | 160 |
| Education & Research | 200 |
| Indirect | 237,984 |
| Induced | 336,567 |
| Total | 1,088,344 |

**Source: MKF Research LLC, US DOL and IMPLAN**

Moreover, winery employment particularly has been growing even through difficult economic years, as shown in **Table 4** below. From 2001 to 2005, reported direct winery employment has grown from 25,363 in full time equivalent jobs to 33,560 full time equivalent jobs – and this is an underestimate as owner employment, in these primarily family-owned businesses, and seasonal and occasional labor, are not included in these numbers.

**Table 4**
**Total Winery Employment**

| Year | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|
| Number of Employees | 25363 | 26620 | 29905 | 31470 | 33560 |

**Source: US DOL**

### *Taxes*

Grape, wine, grape juice and allied industries paid more than $9 billion in federal taxes and an additional $8 billion in state and local taxes in 2005.[7] The table below notes the total excise taxes of all kinds paid at federal, state and local levels, directly and indirectly, as a consequence of grape, grape products and wine production, distribution and sale in the US. In addition, data is available on just the excise taxes paid directly on *wine* at all levels of government in 2004. Such excise taxes exceeded $962 million.

**Table 5**
**Total Taxes, License and Other Fees, 2005**

| | |
|---|---|
| Excise | 1,095,716,000 |
| Payroll | 3,793,168,000 |
| Income | 2,803,294,000 |
| Other | 1,398,051,000 |
| **Total Federal** | **9,090,229,000** |
| | |
| Sales | 2,720,963,000 |
| Payroll | 86,838,000 |
| Income | 737,480,000 |
| Excise | 412,373,000 |
| Other | 4,021,944,000 |
| **Total State and Local** | **7,979,598,000** |

**Source: MKF Research LLC, DISCUS and IMPLAN**

### *Exports*

Exports of US wine and grape products exceeded $1.785 billion in 2005. About 35% of the US table grape crop is exported and about 6% of US wine production, with the balance representing other grapes, must (fermented grape juice) and other products.

[7] IMPLAN, MKF Research LLC and the Distilled Spirits Council of the United States.

### *Tourism*

The wine and grape industries have been stimulated by and have benefited from the growing interest in agricultural, culinary and wine tourism in the US by America's new "experiential" consumer.

Wineries have proven particularly effective tourist magnets, attracting some 27 million visitors, and the many businesses which support them from hotels and bed and breakfasts to shops, restaurants and travel organizations, often reinvigorating the economies of their rural communities.

## CHALLENGES

Despite this healthy performance, the grape and wine industries face a variety of challenges constraining their long term growth. Many other grape producing countries who are exporting their grape and wine products into the US have low-cost land and labor, fewer tax burdens, low or no environmental controls, and receive significant governmental subsidization in the production and marketing of these grape and wine products.

Grapes and wine are a complex combination of agricultural and consumer product risks. While production is subject to a range of climate, soil, pest, disease and market agricultural risks, grape products, from raisins to juice to wine, are discretionary consumer products, sensitive to rapidly changing trends and tastes in a highly competitive global market. A skilled workforce and focused research are needed to meet both types of challenges.

### *Research and Education*

The growth of viticulture and enology research and education resources has not kept pace with the expansion of this industry across the country. For an industry which generates a million jobs, over $162 billion in economic value and pays more than $17 billion in taxes the amount of support received for its fundamental development is amazingly small.

In 2005, the total spent on research and education in viticulture and enology (the growing of grapes and the making of wine) was $31.2 million, 21% of which was provided by industry. While state funding for viticulture and enology research, education and extension has been increasing or at least requested, substantial additional funds are needed to allow for the consistent growth in quality and value of these investments to ensure American wine and viticulture remains competitive.

### *Scarcity of Skilled Labor*

Concerns about a shortage of skilled labor are growing in the industry, whether it be winemaking, vineyard management or vineyard workers. The growth of the industry across the country has exacerbated the problem. The US still has relatively few institutions and programs for viticulture and enology education. The current gradual national expansion is being achieved largely by drawing on the limited existing pool of experts. A larger pool of expertise is available in other winemaking countries but access to these professionals is uncertain. Vineyard work is both an art and a craft, perfected through experience. Finding agricultural workers for the vineyards has been an increasing challenge, especially during recent harvests.

This labor shortage has constrained the continued expansion of the wine and grape industries as well as continuing efforts to improve grape quality and to identify the most appropriate grapes for cultivation in rapidly emerging wine regions.

Currently only five states have full degree programs in viticulture and enology while several others offer part-time classes or community college programs. The introduction of new degree programs in several states, including New York and North Carolina, and the hiring of state viticulturalists in others will make a major contribution towards improving the supply of trained professionals but still meets only part of the need. Several states have been unable to fill positions for state viticulturists and state enologists and several universities have been unable to find qualified candidates to fill open faculty positions in these disciplines.

Moreover, the states with most developed wine making and grape growing industries supplement their formal degree programs and extension services with extensive in-service, part-time courses for mid-career professionals to continue to improve their skills. Such programs are gradually emerging in several states, often at the community or junior college level. Continuing to build this institutional infrastructure will help ensure the long-term strength of the US wine and grape industry.[8]

Additionally, the current political threat to seasonal labor could also negatively impact the American grape industry as much of the vineyard labor comes from Mexico.

[8] The wine industry is particularly notable for the number of participants at all levels who come to it mid-career or as a second career and willing to seek training to develop these skills.

### *Climate and Other Agricultural Risks*

Grape growing's particularly long time cycle adds to agricultural risk in both production and pricing.

In many of the regions with still emerging winegrape industries in the midwest and east coast, grape growers often face a challenging natural environment. Periodically, severe winters can damage harvests. Sudden changes in temperature pose the greatest viticultural hazard. High humidity, attracting pests and diseases, increases grape farming costs and reduces yields. Regions are sometimes affected by hurricane-generated weather during the harvest season, as in the fall of 2005.

*Vitis Vinifera* grapes, the varieties traditionally grown to make wine, often struggle in these environments, requiring substantial additional production costs. This situation led to the development of French-American hybrids as well as the planting of native winegrape varieties (labrusca), which can be produced with lower risk and significantly lower costs. However, demand for wine made from these grapes is limited, although growing somewhat, and the market for Concord varieties for grape juice has been difficult in recent years.

Water use constraints, environmental issues, and rising land prices in the spreading metropolitan regions further increase costs and complicate vineyard development.

### *Juice Grape Prices*

Grapes specifically used in the production of juice products and made up of primarily two varieties – Concord and Niagara − are produced primarily in the states of New York, Washington, Pennsylvania, Michigan, and Ohio. The juice grape industry is experiencing a number of challenges that have resulted in lower prices in recent years. These include a downward trend in overall juice consumption associated with national concerns regarding obesity and the growing interest by the public in lower calorie and lower carbohydrate products. In addition, in 2005 the largest juice grape crop in recent history was produced, adding further downward pressure on prices. As a result, industry consolidation is taking place as well as the exploration of other production and market opportunities.

### *Market Risk for Winegrapes*

It is in the nature of the long cycle of vineyard planting and winemaking that the industry faces continuing patterns of surplus and shortage. The decision to develop new vineyards when grapes are in short supply and prices are rising may be regretted four years later when the similar decisions of other growers all come to market. A market-based varietal planting decision in one year may appear unfortunate when facing a very different consumer market four to seven years later when the wine is ready to be sold. Thus, the market for winegrapes can be highly volatile, with severe price swings, discouraging needed vineyard development.

### *Winegrape Shortage*

Shortage of quality grapes also remains an issue for wineries in emerging wine regions, as demand for the best grapes outstrips their supply. This situation is exacerbated by the challenges of learning to grow new crops in new locations as growers develop the ability to satisfy the need for increasing fruit quality.

### *Grape Juice Market*

Grape juice producers are finding it increasingly difficult to compete in the rapidly changing and consolidating American retail environment. These companies have relatively limited resources to compete with the very large alternative juice companies structured to serve a national market. Grape juice competes not only with other popular fruit juices such as apple and orange, but with a very broad range of consumer products involving aggressive marketing and fierce price competition.

Responding to the American consumer’s rapidly changing lifestyle, demand for new style products and communicating the potential benefits of grape juice products also require marketing resources beyond those currently available to these companies.

### *Scarcity of Financing*

Wineries and vineyards have particularly intense capital and credit requirements, reflecting the unusual time flow of costs and revenues and the combination of agricultural and consumer market risk, as discussed earlier.

Some parts of the winery and vineyard sectors may be under-capitalized as well as under-served by credit and other financial institutions. Relatively few credit and other financial institutions understand the business of wine and winegrapes and are comfortable with its financial requirements. Consequently, both growers and wineries in many parts of the country have difficulty securing adequate financing for their operations.

### *A Highly Competitive Market for Wine*

The continued growth of the US wine industry faces increasing challenges as wine's retail and wholesale channels continue to consolidate and as foreign wine producers target the US market with growing inventories, government support and saturated home markets.

Per capita US wine consumption ranks 38th in the world. Wine Institute data, supported by innumerable studies by foreign producers and governments, indicate that the US and Canada are the only markets in which demand is growing for wine priced above $5 per 750ml bottle. In fact, the US is among the few markets in which demand for wine is growing at all.

#### *Imports*

Imports of wine to the US market have risen consistently for the last decade, focused on the highly price-sensitive under $10 per bottle segment. The share of the US wine market represented by wines made in the US declined from 81.6% in 1998 to 73% in 2005.

Imports now represent more than 27% of the wine consumed in the US, rising from 40 million cases in 1998 to 81 million cases in 2005. The weak dollar increased pressure on importers, but many are absorbing the adjustments to protect the market for their growing surplus of production.

The leading importer into the US remains Italy but Australia has overtaken France as the US's second largest source of imports. Australia's imports to the US slowed in 2005, even declining in 2006. The Australian growth has largely been dominated by the demand for a single brand – [yellow tail], which represents 36% of Australia's exports to the US. Australian imports have shown little strength above $10 per 750ml bottle. France's exports have been declining, although there was some stabilization in 2006 as France tries to reorient its viticulture, winemaking and wine marketing practices. The fastest growing imports to the US are currently New Zealand and South Africa, from a very small sales base.

As noted above, all major foreign wine producers have developed aggressive marketing campaigns targeting the US as the only growing market for mid-priced and more expensive wines – and thus a profitable solution to their domestic wine recessions.

To regain its share of this growing market, continuing investment in quality and value as well as further opportunities to access the consumer market are needed by the American wine industry.

### *Relentless Pressures to Improve Quality and Achieve Value in a Crowded Market*

There have been some 219,000 wine labels registered by TTB (the Alcohol and Tobacco Tax and Trade Bureau) since 2003, from all producing regions. Attracting and retaining consumer attention in this extremely fragmented market demands expensive and specialized marketing and merchandising skills.

Moreover, while the American consumer is seeking higher quality products and shows a willingness to pay increased prices, the consumer is also increasingly value conscious – value defined as “quality for a price.” Thus, wines in all segments of the market face pricing pressures and price erosion even as winemakers and growers face relentless pressure to improve quality and distinctiveness. To respond to these pressures, wineries are exploring techniques to improve business processes and better manage capital costs and employ more sophisticated information technologies and marketing tools. Nevertheless, nearly all wineries continue to face severe margin pressures. The same margin strains are felt by growers who in many communities face development pressures combined with extremely low margins ultimately resulting in the loss of agricultural land.

### *Consolidation in Wine Distribution and Retailing*

In 1991 the top twenty US wine and spirits wholesalers and distributors represented $7.5 billion in sales. By 2005, the top five US wine wholesalers and distributors represented $14.5 billion in sales and 43% of the total wine and spirits market. From 1990 to 2000, the number of wine wholesalers and distributors in the US declined by more than 50%, largely through mergers and acquisitions.

Distribution consolidation has been paralleled, and perhaps driven, by retail consolidation as discount and “big box” stores take growing shares of wine retail sales, reducing margins for distributors through pressures for price and promotional concessions. The market power of the major retail chains is primarily in the mid-price segment but they have also become major outlets for some of the highest priced branded wines. Restaurants are also consolidating, with several restaurant chains also representing thousands of outlets.

The continuing consolidation in the distribution sector makes it increasingly difficult for smaller wineries to gain access to the market, especially the national market. This trend requires them to increase their own sales and marketing expenses, or engage independent marketing services and brokers, even as they face increasing pressure on margins – all of which has highlighted the importance of direct-to-consumer sales strategies for wineries.

## *Access to Market*

Alcoholic beverages are the only industry in America with their own constitutional amendment. The 21st amendment, which signaled the end of prohibition in the US, led to a series of complex regulations and structures which vary by state for the sale of wine, otherwise known as the “three-tier system”: wineries sell to licensed distributors which then sell to retail or restaurant outlets.

There are currently more than 430,000 potential outlets in the US for selling wine, including both off-premise (retail stores, including food and drug chains) and on-premise (eating and drinking places). The alcohol beverage distributor/wholesaler is the link between this vast network of retailers and restaurants and the thousands of wineries in the US.

Relatively few small wineries – which represent the vast majority of US wineries – have access to distributors or succeed in selling significant volume through this system. Distribution businesses are capital-intensive enterprises depending on scale and volume for profitability. Providing distribution for small wineries is often not profitable, given the economics of the distribution industry, their high infrastructure costs and the vast number of small wine brands. Distributors have reported that they now carry a larger number of brands in their portfolios than ever before. However, as portfolios grow, it becomes increasingly difficult and uneconomical for the shrinking number of distributors to give adequate attention to all the brands carried and increasingly unlikely that smaller and emerging brands without substantial marketing budgets will be represented.

Moreover, sales through the three-tier system usually double the winery FOB price of the product, reflecting distributor and retailer markups. Unless they significantly increase the price of their wines sold through these channels, the wineries need to absorb these costs as a loss of revenue. Few small wineries are in position to afford either tactic, particularly in America’s emerging wine regions, where wines are often modestly priced as they build their reputation and quality, or where margins are constrained by the high cost of cultivating winegrapes in challenging environments.

### *The Direct-to-Consumer Market*

How then can America’s wineries sell their product, for which there is often more than adequate demand? The vast majority of the small wineries in the US sell most of their wine directly from the winery to consumers, either tourists visiting a tasting room, festival or farmers’ market or to the members of their wine clubs and mailing lists.  Many wineries lacking distributors also market their own wines directly to local retailers and restaurants. Presence in restaurants is often essential to allow consumers to become familiar with a brand.

**Table 6**
**2005 Revenue of US Wine by Channel**

| | |
|---|---|
| Total Winery Revenue | $11,372,366,000 |
| of which: | |
| Estimated share through 3-tier system | $8,892,434,000 |
| Estimated share through Self Distribution and Direct to Consumer | $1,772,565,000 |
| Wholesaler Revenue | $2,667,730,000 |
| Total Off-Premise Incremental Revenue | $4,979,763,000 |
| Total On-Premise Incremental Revenue | $4,801,914,000 |
| **Total Sales of US Wine** | **$23,821,773,000** |

Source: MKF Research

Thus, maintaining winery direct-to-consumer and self-distribution is critical to the survival of America's small wineries and to the efforts to revitalize many struggling rural communities. Although the smaller wineries represent the vast majority of America's wineries by number, because of their small production their sales represent only a modest share of total US sales of US wine. Thus, allowing direct sales and self-distribution is not significantly disruptive to the three-tier system, as shown in **Table 6** above.

Recent changes in laws and regulation offer these wineries the opportunity to build markets through these channels but these opportunities remain under dispute in several states. In addition, many states have included complex compliance obligations or costly permit fees that may be a challenge to wineries without the appropriate personnel or monetary resources. Experience in several states suggests that a major challenge to wineries seeking to build their direct sales is developing adequate information management systems and efficient and compliant fulfillment structures.

Loss of direct sales access by wineries would quite directly end their businesses and undermine the growth of the wine and winegrape industry in much of the US.

In addition, several states have limited potential retail outlets for wine. In 36 states wine may be sold in food stores – wine is, after all, meant to be consumed with food. However, fourteen states prohibit the sale of wine in such outlets, eleven[9] of which limit the sale to a small number of specialized liquor retailers reducing access to the consumer, particularly for small producers.

[9] Three states permit wine sales in drug stores, including chains, but not food stores.

## EMERGING TRENDS

***Sustainability***

Perhaps the most significant movement to emerge among grape and wine producers and processors in the last decade has been sustainability: the industry-led adoption of grape growing, grape processing and wine making practices to conserve natural resources, protect the environment and enhance relationships with employees, neighbors and local communities. Thousands of growers and vintners have participated in the programs across the country to learn about sustainable practices, led by innovative programs in Oregon and California, with more than a thousand self-assessing their vineyards and winery operations.

As energy prices increased this decade, and price competition in the wine market has accelerated, this movement also has proved a major economic benefit, enabling the business survival of many small enterprises.

***The Wine Industry's Increased Professionalism and Efficiency***

Over the last several years, the wine industry has responded to market challenges by significantly improving its operating efficiencies and management practices. Particularly notable is the improvement in marketing and brand development and management skills, essential in this increasingly competitive environment.

***Rapidly Improving Grape and Wine Quality***

The quality of US wine and viticulture has been steadily increasing and receiving growing recognition, reflected in rising sales on more profitable terms.

## OPPORTUNITIES

Despite the varied challenges, the prospects for the US grape and wine industries are immensely attractive.

### *Growing Market for Wine*

The US wine market has grown by 13.7% since 2002 in volume and by more than 15% in dollars.

This growing demand for wine derives from a variety of underlying trends among American consumers, including:

- Demographics: All generational segments are increasing their wine consumption, led by baby boomers. While wine has long been the favored alcoholic beverage among women, men are increasingly joining them in consuming wine. Wine consumption is also increasing across nearly all ethnic groups and regions.

- Consumer values[10]: Americans are increasingly seeking opportunities to socialize in small groups and at meals, settings which are especially well complemented by wine. The diversity and quality of American wines respond to American consumers' exploration of new product experiences and rising demand for premium products.

- Retail patterns: Retailers are responding to this growing interest in wine by expanding the variety, quality and settings of their offerings, although many challenges for wineries still remain in this area.

- Restaurant patterns: Offering quality and diverse wine has now become a major marketing and business generation tool for America's restaurant industry, which is America's largest employer.

- Health effects: A variety of studies suggest that consuming wine in moderate amounts with food may positively affect the well-being of healthy adults, due to the health benefits associated with grapes, as described below.

### *Growing Market for Table Grapes, Juice and Raisins*

There are many emerging positive health benefits associated with the consumption of table grapes, grape juice, wine and raisins that have the potential to greatly increase the market growth of these products. Grapes and grape products are filled with antioxidant phenols that can enhance human health and nutrition in many ways. Research studies have shown that antioxidants are important to cardiovascular health, lowering the risk of some cancers, improving memory function, and healthy aging. Additional clinical studies are needed to fully articulate these benefits and are in part being supported by the private and public sectors.

The results of these current and future research studies that more clearly define the health benefits of grapes and grape products can help spur additional market demand that will produce greater profitability needed by these industries.

[10] See Wine Institute Consumer Research Study, 2005.

### *Growth of Wine Tourism*

Wine tourism is driving the growth of the wine industry in many regions of the country, providing a major economic stimulus to weakened rural economies and maintaining agricultural traditions and quality of life.

There has been a dramatic increase in destination wineries and wine trails as visitors discover the wineries and wine regions in their state, the surrounding states and across the country. States and counties are increasingly partnering with wineries to promote this tourism for the regional recognition it presents and for the economic benefits it provides.

With only partial data currently available, it is estimated that at least 27 million winery visits currently take place and that winery tourism provides employment to 49,710 persons. In 2005 California had approximately 19.7 million such visits with estimated total tourism expenditures of $2 billion. Michigan, Texas, Pennsylvania and North Carolina each had more than 800,000 visits in 2005, generating total tourism expenditures ranging from eight million dollars to well over $100 million dollars. In 2004, New York had 4.1 million visits and tourism revenue impact estimated at $312 million.

Unfortunately, many regions do not currently track the number of visitors to their wineries or the number of regional visitors drawn by winery visits.

### *Community Support and Charitable Giving*

Complementing grape’s grounding in its region is the deep involvement of grape and wine producers in their surrounding communities, lending support to a vast array of community services and charitable undertakings. Wine-related events, from auctions to festivals to winemaker dinners, have also become a highly successful means of raising funds for good causes, supplemented by the generosity of the industry itself. At least $128 million was raised for or contributed to charities in 2005 by the grape and wine industry.

### *Direct-to-Consumer Market*

Recent court and regulatory decisions have significantly improved opportunities for direct shipment of wine to consumers in several states, expanding opportunities for profitable direct sales by wineries. These opportunities presented by nationwide direct shipping are just beginning to be explored and are not without challenges, as noted earlier.

### *Working Together for Growth*

It is in the culture of the grape and wine industry to work together to improve quality, develop research and educational resources, facilitate regulatory compliance, share expertise and to expand markets through research, tourism, exports and events.

For example, California's non-profit Wine Institute, with more than 1000 members, which focuses on public policy issues in wine, has an active export promotion program, has sponsored a major market development project and supports a substantial regulatory and compliance advisory effort. The New York Wine & Grape Foundation, established in 1985, supports viticulture and enology research with a focus on improving quality and productivity in vineyards and wineries, sponsors New York Wine and Food events and celebrates New York wines on its web site. North Carolina, Michigan, Missouri, Pennsylvania, Oregon and Washington, among many other states, have state-supported wine commissions which actively promote the industry. California supports the Table Grape Council and the Raisin Marketing Board. In Virginia, Tennessee, California, Washington, Texas, Ohio, Pennsylvania, Illinois and several other states, voluntary grape grower and winery associations provide support to members.

Wine America speaks for many of America's wineries on public policy issues while advising its members on regulatory issues and research and other opportunities. Winegrape Growers of America speaks for many of America's winegrape growers. The National Grape and Wine Initiative has brought these and many other organizations together to further strengthen the industry and advance the quality of its products and contributions to the American economy.

The coming together of many of these organizations, led by Wine America, the Wine Institute, Winegrape Growers of America and the National Grape and Wine Initiative, with the support of the New York Wine & Grape Foundation, to sponsor this study reflects the commitment of this industry to band together to grow, both in quality and in value. As this network of family businesses grows, so will its network of supporting enterprises, further expanding this vibrant segment of the American economy.

## METHODOLOGY

### *Data Collection*

Data for this study were collected from a variety of public sources supplemented by primary research with wineries, suppliers, growers and other economic entities and supported by a variety of studies undertaken by industry and professional organizations.

Where actual primary or public data were not available for this preliminary report, actual data collected from primary and secondary sources for several constituent studies, such as the ***Economic Impact of California Wine 2006*** and the economic impact studies completed or underway by MKF Research LLC for Michigan, Illinois, Pennsylvania, North Carolina, Texas, Missouri and Tennessee and the ***Economic Impact of New York Grapes, Grape Juice and Wine 2005***, and similar studies conducted for Oregon, Washington state and Colorado, were used.

### *Direct, Indirect and Induced Effects (IMPLAN)*

IMPLAN is the acronym for "**IM**pact analysis for **PLAN**ing." IMPLAN (www.implan.com) is a well established and widely used economic model that uses input-output analyses and tables for more than 500 industries to estimate regional and industry-specific economic impacts of a specific industry. IMPLAN grew out of work developed by University of Minnesota and the US Forest Service in the 1980s. The model currently has 1500 actives users including the Federal Reserve Bank, the National Agricultural Statistics Service (NASS), the Forest Service, many state and local governments, universities and private organizations.

The IMPLAN model and methodology classifies economic effects into three categories, Direct Effects, Indirect Effects and Induced Effects.

Direct effects are economic changes in industries *directly* associated with the product's final demand. Thus, direct effects consider the direct employment and spending of wineries, vineyards, distributors and immediately allied industries.

Indirect effects are economic changes – income created through job creation in industries that supply goods and services to the directly affected industries noted above. For example, the purchases of electricity and gasoline by wineries and of cash registers purchased for a tasting room.

Induced effects are the effects of these new workers spending their new incomes, creating a still further flow of income in their communities and a flow of new jobs and services. Examples are spending in grocery and retail stores, medical offices, insurance companies, and other non-wine and grape related industries.

## APPLYING IMPLAN TO THIS STUDY

This economic impact analysis is driven by jobs. The number of jobs directly created by the growing and processing and selling of grapes and by the making, distribution and selling of wine, as noted in **Table 3**, are entered into the IMPLAN model. The IMPLAN model then calculates the indirect and induced effects of these jobs in terms of taxes, revenues, wages and employment created. These indirect and induced effects provide a measure of the "ripple effects" of the wine and grape industry through the American economy.

## COMPARISON OF STATE AND NATIONAL STUDIES

This study includes the impact of the sale of wine, grape and grape products direct and by distributors at retail and restaurant levels in all fifty states, as well as suppliers which may be based in all parts of the country. Most state studies of the economic impact of these products have considered only the sale of that state's products within that state and the allied industries based in that state. A national impact analysis is more than the sum of the individual state impacts but also tracks the interaction among the economies of the various states, such as jobs created in Indiana as a consequence of spending and employment in New York or Texas.

**APPENDIX I**
**NUMBER OF BONDED WINERIES IN THE U.S.**

| | 1999 | 2000 | 2001 | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|---|---|---|
| STATE | COUNT | COUNT | COUNT | COUNT | COUNT | COUNT | COUNT |
| AK | 4 | 4 | 4 | 4 | 4 | 6 | 6 |
| AL | 4 | 5 | 6 | 5 | 5 | 5 | 8 |
| AR | 11 | 11 | 10 | 10 | 10 | 8 | 8 |
| AZ | 12 | 10 | 11 | 13 | 13 | 19 | 21 |
| CA | 1,364 | 1,450 | 1,562 | 1,704 | 1,869 | 2,059 | 2,275 |
| CO | 31 | 34 | 40 | 45 | 52 | 60 | 66 |
| CT | 16 | 18 | 19 | 19 | 18 | 24 | 27 |
| DE | 1 | 1 | 1 | 1 | 1 | 1 | 2 |
| FL | 15 | 17 | 22 | 23 | 31 | 37 | 47 |
| GA | 11 | 13 | 14 | 14 | 17 | 23 | 24 |
| HI | 5 | 5 | 5 | 5 | 4 | 5 | 5 |
| IA | 14 | 17 | 18 | 20 | 25 | 37 | 50 |
| ID | 23 | 24 | 24 | 24 | 27 | 30 | 37 |
| IL | 27 | 30 | 37 | 42 | 55 | 68 | 83 |
| IN | 25 | 29 | 31 | 32 | 34 | 40 | 41 |
| KS | 8 | 9 | 10 | 10 | 11 | 12 | 14 |
| KY | 16 | 15 | 16 | 22 | 26 | 33 | 41 |
| LA | 6 | 8 | 7 | 7 | 7 | 7 | 8 |
| MA | 29 | 33 | 32 | 31 | 36 | 34 | 37 |
| MD | 14 | 14 | 15 | 15 | 15 | 19 | 24 |
| ME | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| MI | 56 | 65 | 82 | 80 | 91 | 101 | 109 |
| MN | 14 | 15 | 15 | 16 | 18 | 23 | 25 |
| MO | 48 | 53 | 64 | 62 | 68 | 76 | 89 |
| MS | 5 | 5 | 5 | 6 | 5 | 5 | 6 |
| MT | 2 | 2 | 3 | 5 | 10 | 11 | 12 |
| NC | 21 | 28 | 28 | 31 | 41 | 53 | 68 |
| ND | | | | 2 | 6 | 6 | 8 |
| NE | 3 | 4 | 5 | 8 | 10 | 13 | 16 |
| NH | 5 | 5 | 5 | 4 | 7 | 9 | 12 |
| NJ | 27 | 28 | 32 | 32 | 36 | 38 | 40 |
| NM | 28 | 31 | 33 | 36 | 36 | 36 | 38 |
| NV | 3 | 2 | 2 | 2 | 5 | 6 | 7 |
| NY | 172 | 186 | 185 | 197 | 211 | 227 | 245 |
| OH | 75 | 77 | 90 | 91 | 108 | 109 | 114 |
| OK | 4 | 8 | 12 | 17 | 20 | 28 | 36 |
| OR | 126 | 145 | 164 | 192 | 214 | 250 | 291 |
| PA | 71 | 76 | 84 | 94 | 97 | 108 | 115 |
| PR | 1 | 1 | 1 | 1 | | | |
| RI | 6 | 6 | 6 | 6 | 7 | 8 | 9 |
| SC | 7 | 5 | 5 | 6 | 7 | 8 | 10 |
| SD | 2 | 2 | 3 | 5 | 5 | 10 | 13 |
| TN | 21 | 26 | 27 | 27 | 29 | 29 | 30 |
| TX | 64 | 67 | 68 | 77 | 86 | 110 | 141 |
| UT | 7 | 7 | 7 | 7 | 8 | 8 | 8 |
| VA | 70 | 73 | 86 | 89 | 98 | 105 | 127 |
| VT | 10 | 10 | 8 | 8 | 8 | 10 | 10 |
| WA | 163 | 182 | 231 | 268 | 325 | 376 | 454 |
| WI | 20 | 24 | 26 | 27 | 29 | 35 | 40 |
| WV | 13 | 15 | 16 | 16 | 16 | 17 | 18 |
| WY | 2 | 2 | 2 | 2 | 2 | 3 | 2 |
| | 2,688 | 2,904 | 3,187 | 3,469 | 3,873 | 4,356 | 4,929 |

**Source:TTB**

## Appendix II: Number of Grape Vineyards

| Crop | Total | |
|---|---|---|
| | Farms | Acres |
| Grapes……..……………...2002 | 23,856 | 1,060,295 |
| 2002 acres: | | |
| 0.1 to 0.9 acres……………. | 5,641 | 1,542 |
| 1.0 to 4.9 acres……………. | 5,547 | 12,004 |
| 5.0 to 14.9 acres…………... | 4,315 | 36,617 |
| 15.0 to 24.9 acres…………. | 2,401 | 44,908 |
| 25.0 to 49.9 acres…………. | 2,305 | 80,453 |
| 50.0 to 99.9 acres…………. | 1,614 | 110,609 |
| 100.0 acres or more………. | 2,033 | 774,163 |
| 100.0 to 249.9 acres……. | 1,248 | 188,234 |
| 250.0 to 499.9 acres……. | 435 | 149,925 |
| 500.0 acres or more…….. | 350 | 436,003 |

**SOURCE: 2002 USDA CENSUS OF AGRICULTURE**

## Appendix III

### Grape Bearing Acreage 2002-2005

| State and Type | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| AZ | 2,400 | 2,100 | 1,000 | 400 |
| AR | 1,200 | 1,100 | 900 | 750 |
| CA | 486,000 | 479,000 | 473,000 | 474,000 |
| GA | 1,100 | 1,100 | 1,100 | 1,100 |
| MI | 12,300 | 13,200 | 13,900 | 41,200 |
| MO | 900 | 960 | 1,000 | 1,200 |
| NY | 31,000 | 31,000 | 31,000 | 31,000 |
| NC | 850 | 950 | 1,100 | 1,300 |
| OH | 2,000 | 2,100 | 2,100 | 2,200 |
| OR | 9,400 | 10,700 | 11,100 | 11,700 |
| PA | 12,000 | 12,000 | 12,000 | 12,000 |
| TX | 2,900 | 2,900 | 2,900 | 2,900 |
| VA | 1,900 | 1,900 | 1,900 | 2,000 |
| WA | 52,000 | 52,000 | 53,000 | 54,000 |
| United States | 563,950 | 559,101 | 606,000 | 608,750 |

**Source: USDA, NASS (National Agricultural Statistical Service)
and MKF Research LLC**

## Appendix IV

### Value of Utilized Production – All Grapes*

(1,000 dollars)

| State and Type | 2002 | 2003 | 2004 | 2005 |
|---|---|---|---|---|
| AZ | 7,953 | 8,204 | 1,335 | 550 |
| AR | 2,147 | 1,115 | 1,355 | 1,024 |
| CA | 2,566,918 | 2,234,650 | 2,764,534 | 2,727,406 |
| GA | 2,936 | 2,738 | 3,724 | 4,850 |
| MI | 14,760 | 21,086 | 14,015 | 21,351 |
| MO | 2,023 | 1,849 | 2,612 | 3,017 |
| NY | 46,950 | 38,253 | 32,536 | 34,290 |
| NC | 2,934 | 2,989 | 3,366 | 3,653 |
| OH | 2,309 | 2,448 | 2,000 | 2,699 |
| OR | 32,340 | 36,240 | 32,204 | 36,024 |
| PA | 15,615 | 15,741 | 19,190 | 19,608 |
| TX | 4,004 | 5,220 | 7,812 | 10,625 |
| VA | 6,075 | 4,420 | 4,420 | 6,371 |
| WA | 134,605 | 144,306 | 121,855 | 141,950 |
| United States | 2,841,569 | 2,609,289 | 3,010,958 | 3,013,418 |

**Source: USDA, NASS (National Agricultural Statistical Service) and MKF Research LLC**
*Value is largely dependent on weather-driven crop size

### Total Production – All Grapes

(Tons)

| | Total Production | | | |
|---|---|---|---|---|
| **State and Type** | **2002** | **2003** | **2004** | **2005** |
| AZ | 8,400 | 8,000 | 4,000 | 1,000 |
| AR | 4,800 | 2,400 | 3,000 | 1,900 |
| CA | 6,696,000 | 5,861,000 | 5,623,000 | 6,130,000 |
| GA | 2,800 | 3,100 | 3,300 | 3,500 |
| MI | 42,700 | 94,500 | 62,500 | 100,000 |
| MO | 3,300 | 3,030 | 3,630 | 3,900 |
| NY | 156,000 | 198,000 | 142,000 | 178,000 |
| NC | 2,300 | 2,800 | 3,500 | 3,900 |
| OH | 5,800 | 8,100 | 4,800 | 8,500 |
| OR | 22,000 | 24,000 | 24,000 | 24,600 |
| PA | 53,200 | 85,000 | 86,800 | 90,000 |
| TX | 4,700 | 6,000 | 8,800 | 9,700 |
| VA | 4,900 | 3,600 | 3,700 | 4,900 |
| WA | 332,000 | 344,000 | 160,000 | 415,000 |
| United States | 7,338,900 | 6,643,530 | 6,240,030 | 6,974,900 |

**Source: USDA, NASS (National Agricultural Statistical Service) and MKF Research LLC**

# Appendix V

**Leading US Crop Values, 2005**

| Crop | Rank | '000 |
|---|---|---|
| Corn | 1 | $21,040,707 |
| Soybeans | 2 | $16,927,898 |
| Hay | 3 | $12,491,263 |
| Wheat | 4 | $7,140,357 |
| Cotton | 5 | $5,574,119 |
| **Grapes** | 6 | $3,459,407 |
| Potatoes | 7 | $2,903,137 |
| Citrus | 9 | $2,389,255 |
| Lettuce | 11 | $1,982,297 |
| Tomatoes | 10 | $2,259,537 |
| Almonds | 8 | $2,724,876 |
| Apples | 13 | $1,786,674 |
| Tobacco | 15 | $1,053,430 |
| Rice | 12 | $1,789,225 |
| Strawberries | 14 | $1,383,064 |

**Source: Wine America and NASS**

## ABOUT MKF RESEARCH LLC

MKF Research LLC (www.mkfresearch.com) is the leading research source on the wine industry. MKF Research LLC conducts original research on the business of wine, publishes a number of industry studies and provides business advisory services and custom business research for companies and investors. MKF Research LLC also conducts a number of industry seminars on its research work including the annual invitation-only MKF Research Executive Wine Summit.

### *MKF RESEARCH LLC CUSTOM PROJECTS*

MKF Research LLC's core business is providing confidential custom consulting to wine industry enterprises, investors and suppliers. MKF Research LLC consulting projects have included investment feasibility and due diligence, market analyses, marketing strategy development and financial and operational benchmarking. .

MKF Research LLC conducts the leading research on Winery Direct Sales and Winery Direct consumers and the benchmarking of winery direct activities and has expanded its consumer and trade research capabilities to among the best in the industry.

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#### *Frank, Rimerman + Co. LLP, CPAs*

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This economic impact report is produced and published by MKF Research. As leading wine business advisors, MKF Research provides deep and broad analysis of U.S. wine and grape market trends so business executives can manage the present and plan for the future with confidence.

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