

The Economic Impact of Wine and Grapes in Missouri 2010

Prepared for Missouri Wine and Grape Board

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MISSOURI
WINES™

Stonebridge Research™


A STONEBRIDGE RESEARCH REPORT

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105b Zinfandel Lane, St. Helena, CA 94574
www.stonebridgeresearch.com

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HIGHLIGHTS

FULL 2009 ECONOMIC IMPACT OF WINE AND GRAPES IN MISSOURI \$ 1.6 BILLION ANNUALLY

ECONOMIC IMPACT	
Number of Operating Wineries ¹	97
Number of Vineyards	393
Vineyard Acreage	1,600 Bearing Acres
Grape Crop Size	4,400 tons
Value of Grape Crop/Vineyard Revenue	3,968,000
Full-time Equivalent Jobs	14,051
Wages Paid	\$386.5 million
Cases of Missouri Wine Produced (9L equivalents)	491,721
Retail Value of Missouri Wine	\$59.2 million
Winery Revenue	\$42.4 million
Wine Related Tourism Expenditures	\$175.7 million
Number of Wine Related Visits	817,000
Taxes Paid	176,186,045
Charitable Contributions ²	400,000

¹From Missouri Wine and Grape Board member list. TTB's listing of active bonded wineries as of September 2010 cites 128 wineries in Missouri. However, TTB's definition of bonded wineries is quite broad.

²Stonebridge Research Group surveys indicate that winery charitable contributions average about 1% of sales, including in-kind and cash donations

TABLE 1

TOTAL ECONOMIC IMPACT OF WINE AND GRAPES IN MISSOURI, 2010

REVENUE	\$
WINERY REVENUE	42,365,000
DISTRIBUTOR MARKUP	3,861,800
RETAIL/RESTAURANT MARKUP	13,986,000
WINE GRAPE SALES	3,968,000
TOURISM	175,700,000
SUPPLIERS	4,525,000
RESEARCH/EDUCATION/GOVERNMENT	2,689,600
CHARITABLE CONTRIBUTIONS	400,000
TAX REVENUES – FEDERAL	94,477,733
TAX REVENUES – STATE AND LOCAL	81,708,312
INDIRECT (IMPLAN)	488,170,836
INDUCED (IMPLAN)	298,796,099
TOTAL REVENUE	1,210,648,380
WAGES	
WINERIES	17,770,440
DISTRIBUTORS	2,155,880
RETAIL/RESTAURANT	7,917,700
VINEYARD	9,623,400
TOURISM	92,093,600
SUPPLIERS	2,046,000
RESEARCH/EDUCATION/GOVERNMENT	1,169,000
INDIRECT (IMPLAN)	158,907,300
INDUCED (IMPLAN)	94,783,700
TOTAL WAGES	386,467,020
TOTAL IMPACT	1,597,115,400

Source: Stonebridge Research Group LLC

Executive Summary

Missouri's wine industry has thrived in the five years since the first study of the Economic Impact of its wine and grape industry:

- The number of wineries in the state has nearly doubled¹ from 50 in 2005 to 97 today, with winery revenue growing from \$25.9 million to \$42.4 million.
- Wine production grew of 702,000 gallons of wine in 2005 to more than 925,000 gallons in 2009, a 32% increase in four years, indicating that most of the new wineries are small. In fact, 81% of the wineries in Missouri produce less than 5,000 cases of wine.
- The wine and grape industry and related activities paid more than \$81 million in a variety of taxes to state and local governments and more than \$94 million in federal taxes.

The impact of the wine and grape industry on Missouri's economy continues to grow, producing more than **\$1.6 billion** in total economic value to the state of Missouri in 2009, a near tripling of economic impact since 2005.

Employment

The wine and grape sector and its related activities accounted for more than 14,000 jobs in Missouri in 2009, with an associated payroll of \$386 million.

TABLE 2

TOTAL MISSOURI EMPLOYMENT: WINE, GRAPE AND RELATED INDUSTRIES, 2009

SECTOR	EMPLOYMENT (FTE)
WINERIES	1,054
DISTRIBUTORS	40
RETAIL AND RESTAURANT	385
VINEYARD	600
TOURISM	6,444
WINERY & VINEYARD SUPPLIERS	73

¹ According to TTB's listing of active bonded wineries, the number of wineries in Missouri has more than doubled, from 50 to 128. However, TTB's definition of bonded wineries is quite broad.

SECTOR	EMPLOYMENT (FTE)
RESEARCH/EDUCATION/GOVERNMENT	28
INDIRECT (IMPLAN)	2,941
INDUCED (IMPLAN)	2,486
TOTAL	14,051

Source: Stonebridge Research Group LLC, IMPLAN and U.S. Department of Labor.

Grape Growing

Grape bearing acreage has grown from 1,200 to 1,600 acres, with crop size rising from 2,800 tons to 4,400 tons. Over the last five years the growing interest in wine and grapes has begun to manifest itself in 400 new acres of bearing winegrapes. The Missouri industry now faces a potential surplus of many varieties, although some amounts of sweeter native and hybrid grapes, such as Concord and Catawba, are still imported from other states.

CHALLENGES AND OPPORTUNITIES

Tourism

However, the “Great Recession” has impacted the industry, slowing the growth of tourism and thus winery direct sales. Missouri state tourism reports estimate a 6.3% decline in total visitors to Missouri from 2008 to 2009. Wine related visitors in 2009 were estimated at 817,000, only a 7.6% increase from the 2005 level (and a decline from 2008 levels). Many wineries reported significant visitor declines but some newer wineries reported continued growth in visitor numbers.

Trade Channels

Winery direct to consumer sales grew rapidly from 2005 through 2008 but visitor numbers have declined more recently, turning wineries increasingly toward trade sales. Sales through the wine trade, primarily through three-tier system, represent something over 40% of sales dollars and a likely majority of sales volume. While some of the smaller wineries self-distribute in the state, a significant number of wineries have distributor relationships. This distributor support for Missouri wineries is unusual in the midwest, where many producers have found distributors’ resistant to supporting their product. The increasing participation in the three-tier system has restrained the growth of winery revenues, as distributors usually purchase wine at about 50% of retail pricing. Missouri wineries have faced obstacles in penetrating the restaurant market, although the ‘eat

local' trend has been helpful in opening some doors. Thus, most trade sales have been in the retail channel, particularly supermarkets.

TRAINED LABOR

Some wineries and vineyards, particularly in rural areas, continue to face constraints in finding trained staff for their operations and management, especially experienced sales staff. However, all report satisfaction with the growth of extension and university courses, the VESTA program and the introduction of Viticulture and Enology concentrations within the University of Missouri Plant Science and Food Science degrees. The Viticulture Enology Science and Technology Alliance (VESTA) is a NSF funded partnership between the Missouri State University system, two year schools throughout the Midwest, state agriculture agencies, vineyards and wineries offering online courses and certificate programs.

PLANT AND SOIL SCIENCE/VITICULTURE AND ENOLOGY PRACTICES

Research continues to focus on developing new grape varieties suitable to Missouri's challenging climate, improving viticulture techniques in that environment and improving winemaking capabilities. The Institute for Continental Climate Viticulture and Enology at the University of Missouri, largely funded by the Wine and Grape Board, has grown its staff and programs since its establishment in 2005/2006.

Particular attention is being paid by researchers to improving sustainability, as both an environmental and an economic issue for growers and vintners. Growing grapes in Missouri's climate currently requires intensive and expensive pesticide spraying and virus treatment.

DIRECT SALES/REGULATORY CONSTRAINTS

With consumer direct sales representing more than 50% of winery revenue, and a much larger share of revenue, wine producers remain concerned about potential challenges to their right to ship wine directly to customers both in state and across state borders. The cost and complexity of compliance with shipping regulations in many states have discouraged several small wineries from developing this market.

STATE SUPPORT

Missouri's wine industry has benefited from strong state support, including education and research, promotion, flexible permitting allowing self-distribution, and tourism development. The industry has also contributed, through a tax on sales of Missouri wine.

In return, the industry has fulfilled much of the expectation that it would help revive Missouri's rural communities, attracting visitors and supporting industry and employment.

A CHALLENGING AND COMPETITIVE WINE MARKET

This update of the 2005 Economic Impact of Wine study comes in a very different wine market. The American wine consumer continues to consume wine, and even consume more wine. However, faced with a real loss of wealth, rising unemployment and severe economic anxiety, consumers have become highly price conscious. Retailers are cutting inventory and discounting prices. The success of Missouri's wineries in the face of these challenges is all the more remarkable. Continuing this success will remain a challenge.

Chapter 1: Missouri's Grape Industry

French settlers in the St. Louis and Ste. Genevieve regions began growing grapes in the late 18th and early 19th century. Grape growing accelerated in the 19th century with the arrival of German settlers in central Missouri, near Hermann. In the 1860s Missouri's phylloxera resistant rootstock enabled the recovery of southern France's wine industry. By the 1880s, Missouri was a leading producer of grapes. Except for small scale cultivation of Concord grapes for unfermented grape juice, grape production ceased with Prohibition but revived with the re-opening of Missouri wineries in the 1960s.

Missouri today ranks 12th among U.S. grape producing states.

Table 1.1 U.S. Wine Grape Production, 2009

State	Total Production (Tons)
California	6,544,000
Washington	381,000
New York	133,000
Michigan	96,500
Pennsylvania	64,000
Oregon	40,200
Virginia	8,600
Texas	6,200
Ohio	5,740
North Carolina	4,800
Georgia	4,500
Missouri	4,400

Source: U.S.D.A. NASS

Today Missouri has 1600 bearing acres of grapes, 95% of which are winegrapes. Although the number of bearing acres has grown by a third since 2005, some 200 non-bearing acres remain to reach maturity.

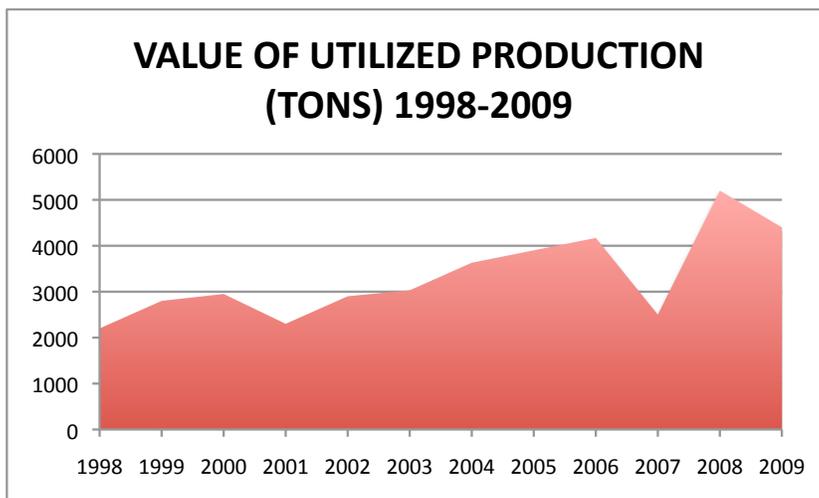
Table 1.2 Public Estimates for Grapes, 1998-2009

Year	Bearing Acres	Utilized Production (Tons)	Price/Ton	Crop Value ('000)
1998	750	2,200	\$531	\$1,169
1999	800	2,800	\$584	\$1,635
2000	850	2,950	\$555	\$1,636
2001	870	2,300	\$630	\$1,448
2002	800	2,900	\$613	\$1,783
2003	900	3,030	\$610	\$1,849
2004	1,100	3,630	\$720	\$2,612
2005	1,200	3,900	\$774	\$3,017
2006	1,300	4,170	\$698	\$2,912
2007	1,400	2,500	\$932	\$2,331
2008	1,500	5,200	\$962	\$5,001
2009	1,600	4,400	\$902	\$3,968

Source: U.S.D.A. NASS

Grape Prices

Grape prices have increased 70% since 1998, particularly from 2006 to 2008.



Source: U.S.D.A. NASS

VINEYARD EMPLOYMENT

Larger Missouri wineries reported utilizing both full-time and seasonal vineyard employees. Many smaller producers in Missouri manage their vineyards without outside labor.

Vineyards in Missouri employed a total of 600 persons in 2009 with wages totaling \$9.6 million.

VINEYARD DEVELOPMENT

Vineyard development is the process of converting land into a developed vineyard. The land must be prepared to plant vines. Once the vine is planted it must be trellised and trained. From the time a vine is planted in the ground it can take between two and four years before the vine bears fruit. During this time, pre-productive (non-fruit bearing) vines must be tended and cared for in accordance with sound viticultural practices to ensure healthy productive (fruit bearing) vines.

Average vineyard size is quite small, with an average vineyard size of slightly more than 4 acres, although the larger wineries tend to own or manage larger tracts.

New planting, particularly of smaller vineyards, continues, although at a slower pace than in earlier years. Developing a new vineyard costs about \$10,000 per acre, with annual farming costs of about \$2,000 per acre.

GRAPE VARIETIES

Missouri's climate is not favorable for the production of traditional European *Vitis Vinifera*, which do not cope well with the extreme cold, humidity and rains and is susceptible to a variety of related fungi and diseases. Although some *Vinifera* grapes are cultivated, the principle grape varieties cultivated in Missouri are Native American, French-American hybrids and hybrids, both new and long-established, developed by the New York Agricultural Experiment Station. All but the native varieties still require quite extensive and expensive treatment, usually spraying, to prevent or treat the various diseases and fungus enabled by the regional climate.

TABLE 1.3 Bearing Acres by Varietal, 2005 to 2009

	2005		2007		2009		% Change
	Bearing Acres	% of Total	Bearing Acres	% of Total	2009	% of Total	
Catawba	101.6	8.5	71.1	5.1	94.6	5.9	-6.89%
Cayuga	25.8	2.1	35.6	2.5	38.1	2.4	47.67%
Chambourcin	83.9	7.0	135.6	9.7	154.2	9.6	83.79%
Chardonel	160.8	13.4	188.9	13.5	190.4	11.9	18.41%
Concord	139.1	11.6	123.2	8.8	139.9	8.7	0.58%
Norton	213.5	17.8	268.2	19.1	307.9	19.3	44.22%
Seyval	53.8	4.5	69.8	5	72.6	4.5	35.07%
St Vincent	40.0	3.3	23.2	1.7	33.6	2.1	-16.00%
Vidal Blanc	95.3	7.9	116.3	8.3	117.9	7.4	23.71%
Vignoles	124.4	10.4	173.7	12.4	207.6	13	66.88%
Traminette	0.0	0.0	58.8	4.2	105	6.6	100%
All Other	161.8	13.5	135.5	9.7	138.2	8.6	-14.59%
Total	1,200.0	100.0	1,400	100	1,600	100	33.33%

SOURCE: U.S.D.A. NASS

The principle varieties produced in Missouri are:

Catawba: A native Labrusca grape which produces a sweet, pink wine.

Cayuga: A hybrid white grape developed by the NY Experiment Station which produces a light, citrus white wine.

Chambourcin: A French–American hybrid which produces a dry red wine.

Chardonel: A hybrid white grape developed by the NY Experiment Station -- a combination of Chardonnay and Seyval Blanc -- which produces a Chardonnay–like wine.

Concord: A native American Labrusca grape which produces a sweet red wine.

Norton/Cynthiana: A native Missouri grape, *Vitis aestivalis*, originally discovered in Virginia, which produces Missouri’s premium red wine.

St. Vincent: A possibly native grape producing a dry red wine often used for blending.

Seyval Blanc: A French–American white hybrid grape producing a light white wine.

Traminette: A hybrid developed by the NY Experiment Station producing a white wine similar to Gewurztraminer.

Vidal Blanc: A French–American hybrid producing a fruity, off–dry, white wine with Riesling qualities.

Vignoles: A French–American hybrid white grape which can produce dry, off–dry and sweet fruity wines produced alone or for blending.

Since 2005, planting of Chambourcin and Vignoles has surged by 83.8% and 66.9% respectively. Traminette acreage was initiated, while Cayuga and Norton grape planting grew above trend to take growing shares of the industry. Catawba planting fell slightly and Concord was flat, although both grapes are imported from Eastern states to fill local demand for sweeter wines. Fewer grapes are brought in from other states than in previous years as new planting has resulted in some over–supply of most grapes.

Table 1.4 Missouri Grape Price by Varietal

Varietal	2003	2005	2007	2009
Cayuga White				
Chambourcin	\$800–1,300	\$800–1,000	\$800–1,000	870
Chardonel		\$800–1,000	\$950–1,150	1,120
Concord	\$350–600	\$360–455	\$400–550	
Norton (Cynthiana)			\$850–1,050	1,070
Seyval			\$700–900	
St. Vincent			\$650–750	
Traminette			\$800–900	990
Vidal Blanc	\$600–950	\$700–1,000	\$1,200–1,400	770
Vignoles			\$1,100–1,300	1,180
Average	\$610	\$774	\$811	902

Source: “Regional Winegrape Marketing and Price Outlook for 2006”, University of Kentucky Department of Agricultural Economics, NASS, U.S.D.A. (2003, 2005 & 2007) and Stonebridge Research Group LLC.

Grape Producing Regions

Grapes are planted in nearly every county in Missouri but are particularly concentrated in Ste. Genevieve, Gasconade, St. Charles, Wright, Phelps and Franklin counties.

Wine is a reflection of its place: the terrain, soil and climate where grapes are grown shape the wine produced from the grapes. In the U.S., distinctive growing regions are defined as American Viticultural Areas (AVAs), defined as a “delimited grape growing area with distinguishable features, the boundary of which has been approved and established by the TTB, (the Alcohol and Tobacco Tax and Trade Bureau of the U.S. Department of the Treasury). Missouri has four such AVAs:

Augusta: The first AVA in the U.S. to be established by the TTB, in 1980. The AVA, a scenic 35 mile drive from St. Louis, encompasses 15 square miles around the city of Augusta near the intersection of St. Charles County, Warren County and Franklin County.

Hermann: This region, 80 miles west of St. Louis, originally settled by German immigrants, is marked by steep terrain, resembling Germany’s Rhine Valley. Much of downtown is a historic district in the traditional German style, dating from the 1800s. More than 150 buildings are on the National Register of Historic Places. The six wineries in and around Hermann account for more than a third of the state's total production.

Ozark Highlands: Established in 1987 and located in southern Missouri, within the larger Ozark Mountain AVA, the Ozark Highlands AVA includes land from just east of Jefferson City in the north to the Eleven Point River in the south, including parts of Phelps, Maries, Osage, Gasconade, Franklin, Crawford, Shannon, Dent, Texas, Reynolds and Pulaski counties.

Ozark Mountain: Recognized as an AVA in 1986, this region includes the southwest part of Missouri as part of a three state track including parts of Arkansas and Oklahoma. This region is the 6th largest AVA in the United States covering 352,000 acres.

The Southeast and Central/West regions of the state are also distinctive wine producing regions.

The **Southeast region**, on the west bank of the Mississippi River around Ste. Genevieve, is the oldest French settlement west of Mississippi. The village of Ste. Genevieve was settled in the late 1740s about two miles south of its present location. New wineries have been opening in the region.

The **Central/West region**, located on the Missouri River at the mouth of the Moniteau Creek around Rocheport, grew rapidly as steamboat traffic increased. Though fires in 1892 and 1922 destroyed many historic buildings, Rocheport was placed on the National Register of Historic Places in 1976.

Issues

The key issues facing Missouri's grape industry are the continuing need for varieties suitable to the challenging climate. Thus, research has long been of great importance to the industry.

Viticultural practices continue to benefit from research and extension services, particularly focusing on both sustainability and consistently improving quality.

After several years of expanded planting, there is some concern about supply of some varieties exceeding demand and prices have been softening.

The growth in education and training programs for viticulture have somewhat eased the shortage of skilled labor for viticulture. Most local vineyard labor is still trained on-the-job.

Chapter 2: Missouri's Wine Industry

Missouri has long quietly played a major role not only in the U.S. but in the international wine industry, contributing the rootstock that allowed the French wine industry to recover from phylloxera in the 19th century and today producing the wood in which wine is aged in many parts of the world. Wine production began in Missouri in 1837 and by the 1880s, Missouri was the second largest wine producer in the U.S.

The modern history of Missouri's wine industry dates to the re-opening of Stone Hill Winery in 1965. The number of wineries in Missouri has increased consistently through the past decade. In 2005 there were 50 wineries in Missouri. Today there are at least 97 separate wineries with new wineries opening regularly. Total wine production in Missouri equaled between 925,429 gallons² and 1.2 million gallons³.

Most of Missouri's wineries are small. The five largest wineries -- St. James, Stone Hill, Les Bourgeois, Crown Valley, Augusta and Mount Pleasant and related operations -- represent 81% of total production in 2009 while wineries producing less than 5,000 gallons represented 81% of the number of wineries in the same period.

Table. 2.1 Size Distribution of Missouri Wineries

Gallons Produced	Number of Wineries, 2009	Number of Wineries, 2005
Less than 5,000	79	35
5,000 to 10,000	8	3
10,000 to 50,000	4	8
More than 50,000	6	4

Source: Missouri Wine and Grape Board

Stonebridge Research Group's estimate of revenue received by Missouri wineries totaled \$49.8 million in 2009, having a retail value of \$77.8 million.

² Based on Missouri Wine and Grape Board listing

³ TTB and Wine America

DISTRIBUTION CHANNELS

Most of the Missouri wine sold through trade channels is sold through the three-tier system. (Smaller wineries tend to self-distribute to the trade.) Missouri wineries have had difficulty placing their wines with on-premise accounts but the retail trade, particularly grocery channels, have been very supportive. Stonebridge analysis indicates that about 95% of placements have been at retail.

Table 2.2 WINE REVENUE BY DISTRIBUTION CHANNEL

WINERY REVENUE	\$42.4 million
DIRECT TO CONSUMER	\$24.3 million
SELF DISTRIBUTED TO TRADE	\$1.3 million
THROUGH DISTRIBUTOR	\$15.8 million
DISTRIBUTOR INCOME	\$3.9 million
RETAILER & RESTAURANT INCOME	\$14.0 million
TOTAL RETAIL VALUE	\$59.2 million

Source: Stonebridge Research Group LLC

WINE PRODUCTION

Missouri ranks 8th in wine production in the U.S.

Table 2.3 U.S. Wine Production, 2008-2009

Rank	State	Production (Gallons)	% Change
1	California	566,728,720	-6%
2	New York	28,554,290	-8%
3	Washington	25,047,345	17%
4	Oregon	5,167,155	-8%
5	Florida	1,795,335	29%
6	New Jersey	1,529,202	-10%

Rank	State	Production (Gallons)	% Change
7	Kentucky	1,234,322	5%
8	Missouri	1,219,204	16%
9	North Carolina	1,182,740	-1%
10	Virginia	1,164,720	-11%

Source: U.S.D.A. NASS and WineAmerica

WINERY EMPLOYMENT

Wineries employ full and part-time workers as labor for bottling, storage, maintenance, and winemaking needs as well as hospitality, finance, sales and marketing functions. Some wineries also employ seasonal labor, for both harvesting and hospitality. Stonebridge Research estimates that 1,219 people are directly employed by Missouri's 97 wineries, including both full-time and full-time equivalent seasonal and contract employees, generating total wages of \$8.9 million.

Table 2.4

Winery Employment	
Employment	1,054
Total Wages	\$17.8 million
Total Revenue	\$42.4 million

Source: Stonebridge Research Group LLC

WINERY VISITORS

Tourists are attracted to Missouri's wineries through a large variety of industry and winery events and festivals. Many wineries offer restaurants and shops, host private events and entertainment.

Missouri also has five Wine Trails, each offering multiple events year round:

- The Hermann Wine Trail runs for 20 miles along the Missouri River between Hermann and New Haven, with six participating wineries.
- The Missouri River Wine Trail, runs along the banks of the Missouri River, with 6 participating wineries.

- The Missouri Weinstrasse runs through towns with German heritage in St. Charles County, with 4 participating wineries.
- The Ozark Mountain Wine Trail, the only wine trail in the tri-state Ozark Mountain AVA, with 7 participating wineries.
- The Route du Vin, around the Ste. Genevieve region, with 6 participating wineries.

WINEMAKING PRACTICES

Winemaking practices in the state continue to improve as research and education programs have expanded. The University of Missouri has recently hired a full-time state enologist.

WINE INDUSTRY ISSUES

The scarcity of trained personnel also has been somewhat alleviated by the growth of these programs, although on-the-job remains the principle training ground for many local vintners.

Small producers face high costs particularly for capital intensive activities such as bottling, as the state lacks mobile bottling operations or, generally, custom crush facilities which can reduce the capital burdens on small operations.

Slowing visitor numbers are reducing winery direct sales, driving more volume into the highly competitive three-tier system, pressuring winery margins. The industry generally is fortunate in finding support from distributors and retailers within the three-tier system but it remains difficult for many smaller producers to find distributors.

The on-premise channel remains somewhat resistant to Missouri wines. Often the best path to building support among the on-premise trade is staff training, including winery visits and developing spokespersons among local chefs. Continued cultivation of the local food movement will also drive some restaurants towards Missouri wines. Contemporary chefs tend to find it difficult to pair their menus with sweeter wines, except for dessert wines (which Missouri could offer) but Norton and Chardonnay could be introduced into local menus.

Chapter 3: Allied Industries in Missouri

Producing and selling wine is a complex activity, involving a vast range of suppliers, service providers and tiers of buyers. These parties typically generate a large share of the industry’s economic impact. This study only considers those products and employees based in the state. Missouri’s wine industry still acquires many of its supplies from out of state specialists.

Several significant wine industry suppliers are based in Missouri. For example, Missouri is the prime source of American oak barrels, used in many regions for aging wine, from such companies as World Cooperage, A&K and McGinnis Wood Products. A relatively small amount of Missouri’s wines are aged in oak: sweet wines tend not to be barrel aged. Custom Metalcraft and the Paul Mueller Company are leading suppliers of stainless steel tanks for fermenting wine but also have relatively modest sales within Missouri. St. Louis Litho is a major producer of wine labels, but also has limited sales within the state. Only revenues and employment generated by services and sales to the Missouri wine industry are included in this analysis.

Winery and Vineyard Equipment, Supplies and Services

Suppliers include cooperage, farm and winery equipment, construction, professional services, tanks, printers, trucking, lab, vineyard development and services.

Table 3.1

Impact of Missouri Wine on Winery/Vineyard Suppliers	
Direct Employment	90
Total Wages	\$2.4 million
Total Revenue	\$4.5 million

Source: Stonebridge Research Group LLC

Due to the small number of such suppliers, we have aggregated the data to protect confidentiality.

WINE TOURISM

The growth of Missouri wine has been a key driver in the revitalization of many of Missouri's rural communities, receiving strong support from both state and local governments. The Missouri state government estimates that wine related visitors represent 2.24% of all visitors to Missouri. Missouri wineries generated an estimated 817,000 million visits in 2009, spending \$179 and creating employment for 6,444 persons.

Table 3.2

Tourism Impact of Missouri Wine	
Direct Employment	6,444
Total Wages	\$92.1 million
Total Revenue	\$175.7 million

Source: Stonebridge Research Group LLC

EDUCATION, RESEARCH AND GOVERNMENT SUPPORT

Marketing and promotion programs are provided by the Missouri Wine and Grape Board, funded by a partial tax on Missouri wine sales.

Table 3.3

EDUCATION, RESEARCH AND GOVERNMENT	
DIRECT EMPLOYMENT	28
TOTAL WAGES	\$1.2 million
TOTAL REVENUE	2.7 million

Source: Missouri Wine and Grape Board, ICCVE and Stonebridge Research Group LLC

Research on viticulture and enology is primary conducted through the Institute for Continental Climate Viticulture and Enology (ICCVE) at the University of Missouri – Columbia, with support from the Missouri Wine and Grape Board, the Missouri Department of Agriculture and the facilities of the University of Missouri. The University also provides viticulture and enology extension services.

On-line courses and field experience is offered by the Viticulture Enology Science and Technology Alliance (VESTA), an NSF funded partnership between the Missouri State University system, two-year schools throughout the Midwest, state agriculture agencies, vineyards and wineries to serve the mid-America wine industry. The program also offers a pathway to a two-year Associate Degree in cooperation with general education programs at local two-year colleges.

Chapter 4: Other Economic Benefits

The wine and grape industry generated a variety of tax revenues from grape to consumer. The industry is also unique in the scale of its charitable support of its communities.

Tax Revenues

The wine and winegrape industry generates significant tax dollars, benefiting federal, state and local governments. Tax dollars are raised through sales taxes, excise taxes, income taxes, estate and gift taxes, payroll taxes, property taxes and other business taxes and fees, such as licenses, and import duties.

Table 4.1 Impact of Wine and Grape Industry on Tax Revenues

STATE AND LOCAL TAXES	
PAYROLL	\$1,311,017
BUSINESS TAXES	\$64,743,738
INCOME TAX	\$9,702,738
CORPORATE TAX	\$5,950,819
TOTAL	\$81,708,312
FEDERAL TAX	
PAYROLL TAX	\$46,483,538
BUSINESS TAX	\$12,421,128
INCOME TAX	\$23,159,058
CORPORATE TAX	\$12,414,001
TOTAL	\$94,477,725
TOTAL TAXES PAID	\$176,186,037

Source: Stonebridge Research Group LLC and IMPLAN

Missouri's wine, grape and allied industries paid \$81.8 million in state and local taxes and \$94.5 million in federal taxes in 2009.

Charitable Contributions

The wine industry is unique in its charitable contributions to its community. Based on discussions with wineries, charitable contributions by the industry, both financial and in goods and services of various kind, is estimated at about \$400,000, or slightly less than 1% of winery revenues.

Methodology

To produce this assessment, Stonebridge Research Group LLC focused on the largest and most significant section of the industry involved in wine production and consumption, grape cultivation and allied industries – distribution, tourism, and equipment and suppliers. Other economic benefits, including tax revenues, financing, charitable contributions and other indirect and induced benefits generated by the wine industry are also summarized.

This report is an update of the 2007 study of the economic impact of Missouri wine, based on 2005 data. This study is based on 2009 data. In some areas, data sources available to us have changed or been somewhat revised. In certain other areas, we have been able to improve the accuracy of the analysis, such as the supplier impact calculations. Within this framework, every effort has been made to make this report as comparable as possible with the previous reports so that readers may assess the progress of the industry.

Direct, Indirect and Induced Effects (IMPLAN)

Much like dropping a rock into a pond, the wine industry has ripple effects on the Missouri economy. Economic impact studies estimate the impact of an industry in a defined geographical area by identifying and measuring specific concrete economic “events.” The events tracked in this report are jobs by industry code.

IMPLAN is the acronym for “**IM**portant analysis for **PLAN**ing.” IMPLAN is a well established and widely used economic model that uses input-output analyses and tables for over 500 industries to estimate regional and industry-specific economic impacts of a specific industry.

Thus, the full economic impact of Missouri wine, as shown in **Table 1**, combines the Missouri wine industry’s direct, indirect and induced economic effects as measured by the application of the IMPLAN model to the employment data presented in **Table 2** of this report.

The IMPLAN model and its structure are updated annually to reflect changes in the U.S. economy, in wages, in productivity assumptions and in regional economic structures. Thus, readers should not try to directly compare the IMPLAN results from the first report with the results of this update.

The IMPLAN model and methodology classifies these effects into three categories, as defined below: Direct Effects, Indirect Effects, and Induced Effects.

Direct Effects

Direct effects are economic changes in industries **directly** associated with the product's final demand. This, direct effects in this case consider the direct employment and spending of wineries, vineyards, distributors, and allied industries, data on which Stonebridge Research Group LLC collected through primary research.

Indirect Effects

Indirect effects are economic changes – income created through job creation – in industries that supply goods and services to the directly affected industries noted above. Examples of industry effects are purchases of electricity and gasoline by wineries, janitorial services by wine bottle manufacturers, and cash registers purchased for use in a tasting room. These may also be defined as “secondary economic exchanges.”

Induced Effects

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, internet providers, and other non-wine related industries by workers in industries allied to the wine industry – such as the spending by the janitor working under contract to the wine industry supplier based in Missouri. These tertiary exchanges induce more jobs and incomes throughout Missouri, based on the original economic flows from the wine industry.

Measuring the Full Economic Impact of the Missouri Wine Industry

Missouri's wine industry has a “multiplier” effect, extending across a broad network of economic benefits. The revenue derived by the wine industry becomes income for other workers and firms, who spend more money on other goods and services.

ABOUT STONEBRIDGE RESEARCH GROUP, LLC

Stonebridge Research Group is a leading strategic advisor to the wine industry, providing thoughtful and realistic guidance for running a wine business. Stonebridge Research offers a unique range of fact-driven services to improve wine business management, including in-depth business reviews; operational benchmarking; business, sales and financial planning; market, industry, brand and consumer research, and economic impact analysis, investment due diligence and litigation research.

The company is known for quality of insights, precision and thoroughness of analysis, reliance on facts rather than conventional wisdom and a determination to listen to clients and exceed their expectations. Clients include wineries, wine-related enterprises and industry groups worldwide seeking more effective ways to manage their businesses and improve performance.

Stonebridge Research has recently completed major projects for clients including the French Trade Ministry, the Wine Institute, the California Association of Winegrape Growers, Napa Valley Vintners Association, the Office of Champagne, Wines from Spain and Family Winemakers, Wines from Chile, the Florida Grape Growers Association and numerous individual producers, industry investors and suppliers. Stonebridge has recently introduced its Fine Wine Trade Monitor, a semi-annual in-depth survey of 75 leading decision makers in the U.S. wine trade, sponsored by Napa Valley Vintners, South African Winegrowers, the Paso Robles Wine Country Alliance, among others.

Stonebridge Research was founded in 2008 by Barbara Insel and a group of food and beverage investors interesting in bringing a new level of analytical rigor to the wine industry. Stonebridge Research has research partnerships with the Napa Valley Vintners, the Napa Valley Destination Council, and the Culinary Institute of America at Greystone.