



The Economic Impact of the Wine and Wine Grape Industries on the Oregon Economy 2022

Summary Report

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Executive Summary

Economic activity directly or indirectly related to Oregon's wine industry in 2022 was estimated to be \$8.169 Billion. In 2019, the sum was \$7.243 billion (the change from 2019 to 2022 was +12.8 percent). Growth has continued in the industry since 2019 after many challenges, some of which continue beyond 2022.

In 2022, estimated wine-related jobs in Oregon totaled 39,437, down 611 jobs from 2019 (-1.5 percent); related wages topped \$1.69 billion in 2022, 12.2 percent more than in 2019. A combination of pandemic changes in Oregon's labor force, rising inflation, and wage levels across Oregon as pandemic restrictions were lifted helped explain higher wages related to the wine industry and allied businesses versus lower job levels.

- Over 1,470 Oregon wine grape growers produced fruit in 2022 from 44,487 planted acres and 40,774 bearing acres for a total value of \$330 million (including more than 610 estate vineyards).
 - Planted acreage increased by 2,588 acres in 2022 compared to 2021 and by over 7,080 acres since 2019;
 - Approximately 137,065 tons of grapes were produced in 2022, an increase of 19.5 percent from 2021 and 29.5 percent more than in 2019;
 - Statewide median grape prices were approximately \$2,353 per ton (up from \$2,225 in 2019), with pinot noir, gamay, chardonnay, and cabernet sauvignon the most expensive grape varietals;
 - North Willamette Valley remains the largest grape-growing region in Oregon, with almost five times the volume of South Willamette, Umpqua, or Rogue valleys;
- Over 1,110 Oregon wineries or wine companies sold over 5.7 million nine-liter (9L) equivalent cases of wine, with revenues of over \$956.4 million in 2022 from sales of packaged wine:
 - Oregon winery production in 2022 was estimated at 6.602 million 9L-equivalent cases
 - Approximately 60.1 percent of 9L equivalent cases were sold in other U.S. states outside Oregon in 2022, up from 57.6 percent in 2019;
 - Grapes crushed by Oregon wineries were 94,426 tons, 11.6 percent more than in 2019, with 2,376 tons of fruit sourced from outside Oregon; and
 - Direct-to-consumer (DTC) shipments were 19.3 percent of 9L equivalent cases sold by Oregon wineries in 2022, down from 21.8 percent in 2019;
 - All DTC channels sold 82,000 more 9L equivalent units in 2022 than in 2019 as winery sales into distribution channels grew alongside continued direct-to-consumer sales.

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The pandemic's shadow remains on Oregon's economy and wine industry, though it is fading. Although on-premise sales revenues (restaurants, hotels, etc.) in total closed in on pre-pandemic levels in 2022, a combination of business closures, sales channel shifts, and consumer taste changes have kept wine sales there below 2019 levels. Other parts of Oregon's wine-industry supply chain saw mixed results.

- Between 2019 and 2022, the impact of wine-related tourism fell by 15.1 percent, still contributing \$758.4 billion in revenues to the Oregon economy, supporting 8,806 jobs and \$318.6 million in wages specific to wine-related travel in Oregon:
 - Average tasting room spending per visitor increased slightly since 2019.
- Retail sales of Oregon wine via all channels outside the winery topped \$1.085 billion in 2022, down 9.5 percent from 2019:
 - These sales supported 3,500 jobs in stores and retailers, 5,794 jobs in restaurants and other on-premise retail (including wine bars), and at least 401 jobs in distributors and importers.
 - Jobs were fewer in 2022 for off-premise and on-premise retail than in 2019 (9,912 in 2019 versus 9,294 in 2022).
- Allied industries, such as vineyard management and development and also winery maintenance, have all had revenue gains since 2019. Still, trucking, printing, marketing services, and research and education had lower revenues due to rising costs and shifting channel sales.
- Wine-related activity in 2022 contributed over \$264.8 million in state and local tax revenues for Oregon (+13.1 from 2019), with over \$92 million in property tax revenue (approximately 34.9 percent of total estimated tax revenues in 2022).

This edition of the Oregon wine industry's economic impact includes more details, new data sources on visitors to Oregon's wineries, and data on the statewide tourism economy overall. Hiring is a challenge and suggests workforce development efforts must increase. Wineries have occupations similar to any manufacturing facility, from floor workers to machine operators to supervisors. Because of tasting rooms on winery grounds, sales, marketing, and perhaps chefs may find work at wineries. Occupations in vineyards and wineries must remain a focus for workforce investment efforts to support workers from farm training to business degrees. These jobs may also employ workers who flex into other industries, from hotel jobs to manufacturing. We also used two new data sources in this report: Community Benchmark (visitor and direct-to-consumer (DTC) data) and the 2023 Wine Labor Market Survey, both investments made by the Oregon Wine Board (OWB) to describe labor conditions and wages. Organizations like the OWB and other regional advocacy organizations supporting regional economic development and bringing consumers to Oregon wineries (affecting direct-to-consumer possibilities, tasting room visits, and advertising generally) endorsed this report.

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Introduction

Oregon's wine industry continues to grow after facing multiple shocks since 2019. Effects from the pandemic, wildfires, related smoke concerns, and shifting visitor conditions created challenges from 2019 to 2022. The Oregon Wine Board (OWB) has commissioned similar studies quantifying the economic impact of Oregon's wine grape and wine-producing industries in Oregon in the years 2005, 2010, 2013, 2016, 2019, and 2020 (the last two years were combined) and now 2022. For this 2022 edition, Economic Forensics and Analytics (EFA) is the lead consultant, with Full Glass Research (FGR) providing guidance and industry modeling when needed (FGR has been involved since this report's 2005 edition). We use 2019 as a pre-pandemic benchmark and comparison year for industry data, especially comparing the previous economic impacts to those from 2022.

This report focuses on a "multiplier" effect from wine-related businesses and their employees. Incomes generated by wineries and vineyards come from selling commodities (grapes) and products (bottled and bulk wine after grapes are processed), workers spending their wages, and vendors generating revenues that become more wages and spending. Vineyard investment, a signal of changing confidence in Oregon's wine industry, increased from 2019 to 2022. We will see in this report that Oregon's wine industry continues to create more income for businesses, households, and government through a mix of core and allied industry changes.

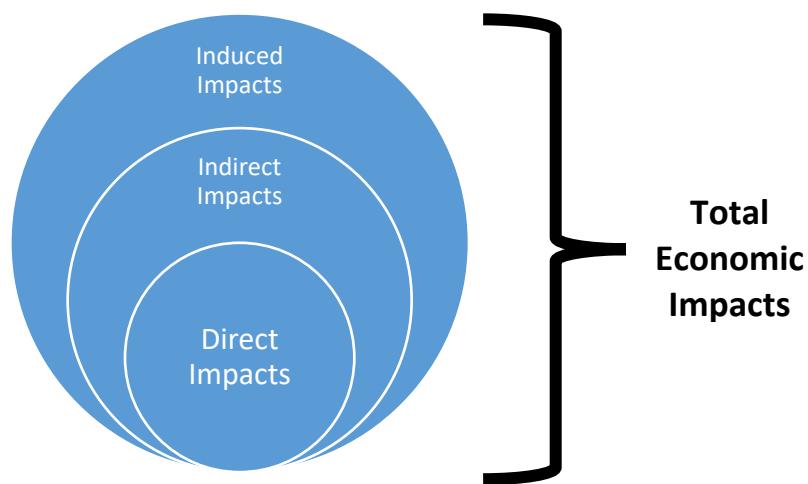
Workers and the number of jobs supported by the wine industry are critical to these reports. In this report, we see specific occupations or job skills that are important to wineries and vineyards versus others, but the economic impacts affect hundreds of professions. We provide a focal section on tourism and its links to the wine industry, as data from new sources offers more insight into visitors and their spending at Oregon's tasting rooms and winery event facilities. We consider tourism spending attributable to winery visits as another "core" industry in Oregon's wine-industry supply chain. Allied sectors, such as vineyard management, trucking, maintenance, professional services, research, education, and others, extend that supply chain to hundreds of industries and thousands of workers statewide based on the estimated economic impacts and connections among industries.

This study's key findings and other data can be used for legislative and regulatory advocacy, business or government strategy, investment, and academic applications. It is essential to recognize that these measures consider revenues and not profits or value-added incomes; the costs of doing business continue to rise, as do the level of taxable transactions. As reported here, economic impacts are about cash flows, taxable transactions, and incomes rather than value-added income to Oregon's economy.

Methodology

This report combines primary statistics (including survey work our team conducted with OWB's assistance and networks in 2023), secondary data that includes multiple years of the University of Oregon's [Vineyard and Winery Report](#), and jobs, wages, and business revenue estimates from producing wine or harvesting wine grapes from various official and proprietary data sources.¹ Vineyard and winery operations become goods and services demand across additional "core" industries: distribution, retailers, restaurants and wine bars, and tourism. Travel Oregon and Dean Runyan Associates (DRA) provided estimates on tourism spending and jobs for Oregon's counties and the state, helping define the industry's effects related to winery visits. [Community Benchmark](#) also provided data from Oregon winery clients to help us more precisely measure direct-to-consumer (DTC) sales and visitors through winery doors. The economic impacts flow from the economic size of these core industries. The sum of business revenues, wages, and employment in these core industries are our estimates of "direct" economic impacts as described below and estimated by the IMPLAN® model.²

Figure 1: Economic Impacts



Direct effects come from vineyards and wineries generating revenues and paying vendors and workers to help produce bottled wine from the current year's harvest. **Indirect** effects come from those workers' and vendors' spending on a broad array of other merchants, vendors, and employees, creating a second round of supported business revenues, jobs, wages, and tax revenues. This round of spending begins **induced** effects on Oregon's economy. As affected employees and businesses spend on purchasing or producing goods and services across

¹ See the Sources section for more detail on the data sources we used to complete this study.

² Please see <http://www.implan.com> for more information on IMPLAN® and also the "Economic Impact Estimation" section in this report.

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Oregon, business revenues rise for grocery stores, marketing and public relations, personal services, restaurants, accountants, carpenters, and other industries.

Allied industries include vineyard and winery maintenance and management (including the revenues and jobs of those businesses that expand the amount of grape acreage planted), trucking, glass, corks, seals, label printing, warehousing, and various professional services. For example, during regional wildfires, the demand for testing facilities increases because wineries are concerned about related smoke effects. These professional services and other allied industries serve hundreds of other industries throughout Oregon but have specific revenues and associated jobs and wages paid directly by vineyards and wineries. We call out those allied industries as distinct from the array of indirectly affected industries because of their strong connections to Oregon's wine industry.

A winery's sales are either domestic (in Oregon) or exported (elsewhere in the world, including other states in the US). Wholesaler revenues made by Oregon-based workers or firms impact the Oregon economy, regardless of where Oregon wines are distributed. We count the value-added services from sales of imported wines by Oregon-based retailers and restaurants. These sales do not reflect the direct economic impact of Oregon wine and grape production but represent extensions of businesses and infrastructure to help support jobs and broader spending based on the wine industry. Revenues to other states and countries are "leakages" inside the IMPLAN® model and are not counted. Oregon-based distributor sales outside Oregon are not estimated unless those businesses sell Oregon wines.

Broader economic effects come from vendors and workers spending their revenues and wages. Visitors to wineries, especially when they stay overnight or perhaps use a winery as an event center (weddings, corporate retreats, etc.), augment indirect impacts on vendors and winery employee spending. Such linked economic outcomes reflect shared marketing and regional partnerships across wineries, restaurants, hotels, and transportation businesses.

Each edition of this report has some methodology changes. The following changes were made from the previous (2019) version:

- Oregon Liquor Control Commission (OLCC) no longer publishes wine gallonage produced as distinct from beer, which means we needed to use different sources for production data and rely more heavily on the University of Oregon's annual report;
- The Federal Tax and Trade Bureau of Alcohol and Firearms (TTB) is also no longer publishing timely data on wine production by state (national-level data are available monthly and annually as of 2023 data);
- Community Benchmark and Oregon Wine Board (OWB) provided more data on winery visitors, sales channels, such as DTC, and wages for specific occupations through a labor

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market survey completed in 2023; and

- We continue to use additional data sources such as Nielsen, SipSource at Wine and Spirit Wholesalers of America³, and BW166 to fill information gaps for distribution and retail tier outcomes.

During the summer and fall of 2023, EFA and OWB surveyed Oregon's vineyards and wineries. The survey was focused on recent pricing, yields, overall costs, and revenues from each industry. Wineries and vineyards were asked different questions as self-identified below:

Winery Questions	Vineyard Questions
• Prices and percentage volume by sales channel (DTC to International);	• Acreage, planted and bearing
• Cases (9L equivalents) sold in 2022;	• Yields
• Cases (9L equivalents) produced in 2022;	• Full-time and part-time employees
• Full-time employees and part-time employees;	• Major expenses in 2022 (payroll, operating expenses);
• Major expenditure levels for 2022;	• Average price per ton;
• Cash and product charitable contributions in 2022;	• Cost per new acre developed from dirt to first harvest;
• Number of visitors.	• Maintenance cost per acre per year.

Survey answers provide additional information throughout this study and support or help define assumptions we use to fill information gaps. Charitable contribution levels and a beginning look at visitor volume are just two examples. We want to thank those vineyard owners, managers, and winery leaders who participated. Let's now have a brief look at wine in Oregon's economy.

Wine in the Oregon Economy

The Oregon wine industry retains much of its economic value locally because grapes are grown near winery locations. This supply-chain integration (agricultural harvest as inputs in manufacturing and retail tasting rooms on winery grounds) is an economic-development strategic goal that is difficult to achieve outside of a few industries. Oregon wineries buy grapes from regional vineyards and produce wine using equipment like other food or beverage manufacturing processes. The cost of goods sold for wineries is mainly grape purchases from local farmers (the 2022 University of Oregon Vineyard and Winery Report suggested almost 95 percent of grapes used in Oregon wine came from Oregon) or from the winery's vineyards. Such transfer costs within "estate" wineries exemplify vertical integration and local value retention from economic development. In 2022, over 94,420 tons of grapes were harvested and used to create wine for Oregon wineries; over 137,000 tons were harvested, with some grapes

³ Please see <https://www.bw166.com/>; <https://www.wsba.org/sipsource>; for more on these data sources.

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or grape juice exported from Oregon to other wine-producing areas for blending. The sale of a finished, consumer-packaged product, rather than as a raw commodity or bulk juice/concentrate, is one of the economic advantages of wine as an agricultural product. This retains more of the value added to the regional economy.

Wine distribution from wineries to retailers and restaurants provides additional wages and employment for storage, trucking, and delivery services; the pandemic changed how consumers buy wine with more direct-to-consumer (DTC) transactions. Visitors come to Oregon to visit wineries, enhancing Oregon's economy like any other attractions (such as Mount Hood or Crater Lake). When visitors come and stay overnight, the effects include more income and jobs for regional restaurants and brick-and-mortar retailers; winery grounds sometimes provide event facilities for weddings and corporate events that regional enhance on-premise wine sales and overnight stay demand that would not be there but for vineyards and wineries in Oregon. Each industry "tier" contributes tax revenues for city, county, and state government use. We estimate state tax revenues and fees captured by incomes and transactions (the privilege tax on wine production, transient lodging tax (TLT) revenues, and state income taxes are examples).

Direct-to-consumer (DTC) markets allow further vertical integration in the wine industry. Wineries can vertically integrate from dirt to retail from sales through an array of DTC channels: (1) wine clubs, (2) tasting rooms, and (3) catalog or third-party sales. Wine clubs are a classic example of marketing efforts converted to sales, expanding demand driven by this industry when connected to winery visitors and events. Online wine stores and similar outlets have developed ways for consumers to purchase wine without leaving their homes. Such retail choice, especially when wine is delivered home, allows broader choices for wineries regarding inventory management. Table 1 shows summary data on DTC sales of Oregon wines.

**Table 1: Direct-to-Consumer (DTC) Dollar & Volume Sales, 2019 & 2022,
Share of Sales In-state vs. Out-of-State for DTC Sales in Each Year**

Oregon DTC Shipments: In and Out-of-State January to December 2019	Oregon DTC Shipments, In- and Out-of-State January to December 2022
In-state	In-state
Value Share (Dollars): 42%	Value share (Dollars): 45%
Volume Share (9L Equiv Cases): 47%	Volume share (9L Equiv Cases): 46%
Out-of-state	Out-of-state
Value Share (Dollars): 58%	Value share (Dollars): 55%
Volume Share (9L Equiv Cases): 53%	Volume share (9L Equiv Cases): 54%

Source: FGR, OLCC, Nielsen, and BW166

The economic gains from Oregon wineries spread that value through vendor and employee payments, creating demand for other " allied " industries or strategic partners. For example, when winery visitors stay overnight at a local hotel, that creates a "ripple" effect in the local economy, both in hotel revenues and employee wages (indirect impact) and the spending in

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Oregon they generate (induced impact). Demand from in-state wineries supports local professional services, producers and sellers of agricultural and industrial equipment or infrastructure, and sellers of vineyard and production inputs. The in-state industry can support more in-state supplier jobs and revenues as it grows.

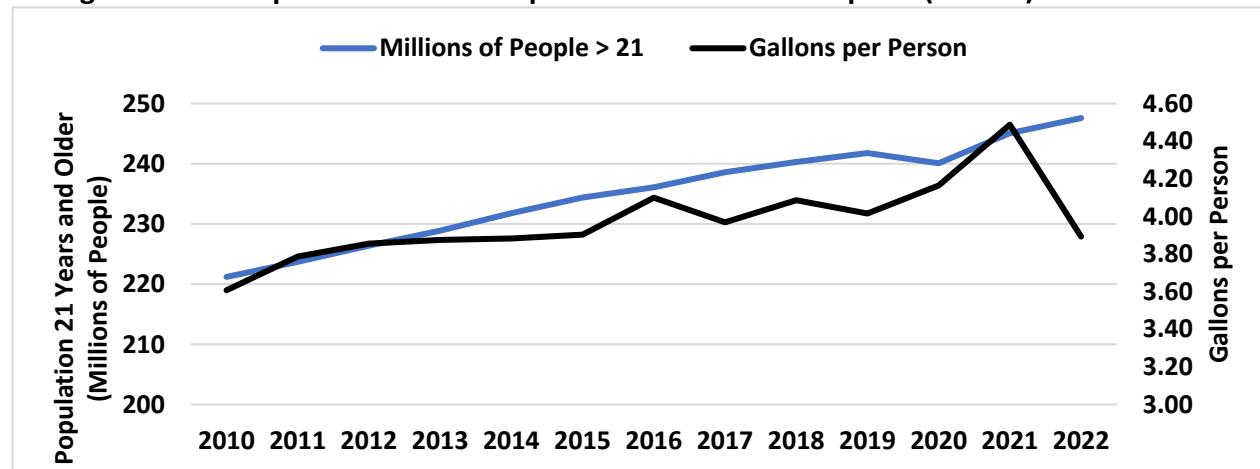
The sale of wine in the wholesale and retail tiers creates sales, administration, and logistics jobs. Wine production remains a labor-intensive business, regardless of technological advances. A multiplier effect is created – revenues made by wineries transmit additional revenue, wages, tourism, and tax effects – and broadens economic gains across the state economy. Lastly, wineries, through their operations and broader impacts, also create tax and fee revenues at all levels of government.

Summary Data

The Wine Market in the U.S. and Oregon

Figure 2 shows how US population growth and annual wine consumption have evolved since 2010. Notice how total gallons consumed have increased annually since 2010, while per capita consumption for the US population over 21 experienced a recent peak in 2021 and a decline in 2022. Oregonians also drink wines from California, Washington, and wine regions worldwide. Oregon wines constitute a minority of all wine sales within the state. However, sales of Oregon-produced wine make a broader contribution to the Oregon economy versus wines from other places, as out-of-state wine sales only impact jobs and value at wholesale and retail levels.

Figure 2: U.S. Population and Per Capita Table Wine Consumption (Gallons) 2010-2022



Sources: U.S. Census, Statista, Alcohol and Firearms Trade and Tax Bureau (TTB), Wine Institute

Since the 2019 report, the overall US market for wine has been volatile, with wholesaler orders initially dropping, while retail tier sales encountered a significant drop on-premise (restaurants,

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etc.) and a spike in off-premise store sales. Sales increased as wholesalers replenished inventories, but in 2022, wine sales in all tiers, from wineries to retail, began to decline. Two major forces are at work: (1) pandemic impacts on trade and consumer behavior; (2) shifts in consumer preferences related to wine. Oregon wines were more resilient than those from many other regions because their production is concentrated in the more in-demand price segments and varieties, and many were able to adapt to channel shifting by boosting club and online sales and expanding direct-to-trade and local consumer sales. In addition, Oregon wines continued to outperform other regions in major retail store channels.⁴

Sales by Oregon wineries connect grapes harvested by farmers to broader supply-chain partners and ultimately to global consumer markets. The following sections will provide details on the direct economic impacts of Oregon's primary wine-related industries:

- Wine Grape Cultivation and Farming;
- Wineries and Wine Manufacturing;
- Distribution and Wholesale;
- Retail and Restaurant Sales (On- and Off-Premise); and
- Tourism (Wine-related travel and tasting room retail).

Wine Grape Cultivation

Direct Employment: 1,660 jobs

Total Wages: \$61,710,500

Wine Grape Grower Revenues, 2022: \$158,412,500 (non-estate bottled grapes)

Oregon remains in the top five states for overall wine production and growing premium wine grapes ("premium" grapes cost more than \$1,000 per ton when purchased or transferred). The University of Oregon estimated that Oregon vineyards harvested approximately 137,065 tons of grapes at an average price of \$2,353 per ton in 2022, representing increases from 105,586 tons harvested at \$2,225 per ton in 2019. Planted acreage was estimated to have increased from 37,398 acres in 2019 to 44,487 in 2022. It should be noted that 2022 was a higher-yielding vintage, which further boosted the total crop value. Vineyards owned by wineries ("estate" vineyards) harvest grapes, representing a transfer cost to a winery, but not a cash transaction.

In 2022, Oregon wine grapes were the state's most valuable fruit crop, according to the National Agricultural Statistical Service (NASS) and the University of Oregon. Grape vineyards in 2022 generated a total market value of \$330 million (including grapes harvested at estate wineries) in Oregon. The value of estate-bottled grapes is not in the vineyard tier in practice; they are how wineries vertically integrate. Wineries have this as part of their costs and revenues, with value-

⁴ NielsenIQ retail scan data, SipSource wholesale data, and Wine Market Council research suggest consumers in total have cut back on alcohol purchase and consumption across most categories (wine and others).

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added income through the crush and storage processes. Approximately 48 percent of grapes are non-estate, accounting for \$158.4 million just for wine-grape farmers alone. Table 2 provides a quick comparison to other crops.

Table 2: Oregon Total Dollar Value by Commodity, 2010, 2016, 2019, 2022, Selected Crops/Fruits

Commodity	2010	2016	2019	2022
Wine Grapes	\$62,321,000	\$167,800,000	\$237,784,000	\$330,026,000
Blueberries	\$59,400,000	\$104,580,000	\$134,000,000	\$183,000,000
Hazelnuts	\$59,670,000	\$118,800,000	\$84,480,000	\$100,750,000
Pears	\$76,347,000	\$148,000,000	\$108,774,000	\$90,752,000
Cherries	\$77,256,000	\$79,200,000	\$75,221,000	\$68,282,000
Apples	\$29,254,000	\$59,800,000	\$38,746,000	\$40,753,000
Cranberries	\$10,950,000	\$10,600,000	\$14,851,000	\$16,442,000

Source: NASS, University of Oregon Wine and Grape Report Various years

Wineries

Direct Employment in 2022: 3,977 workers

Total Wages in 2022: \$198,507,000

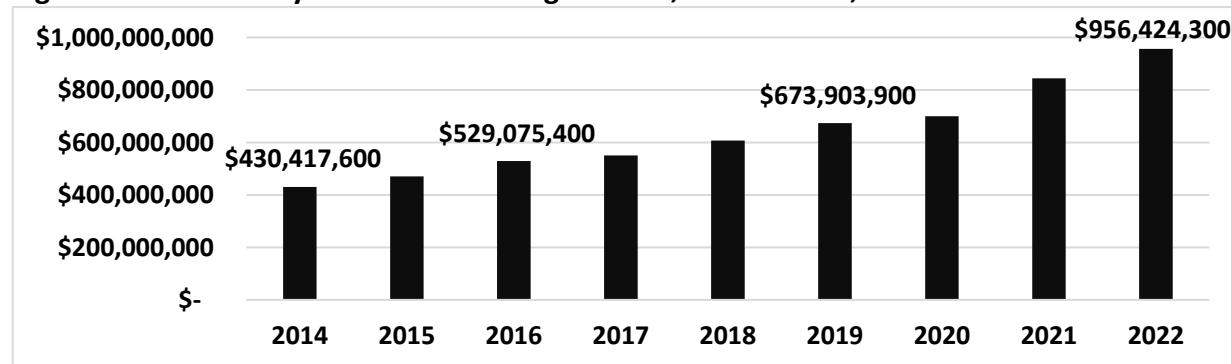
Total Revenue in 2022: \$956,424,300

Figure 3 shows the evolution of winery revenues since 2014. Table 3 shows the estimated sales by channel for Oregon wineries. Winery revenues are up, and some balance has returned to on-premise and off-premise sales as restaurants and drinking places opened up between the pandemic shock in 2020 and 2022. Throughout that period, wineries utilized direct-to-consumer (DTC) markets and grew revenue (2020 growth was relatively small versus 2021 and 2022, as shown in Figure 3).

Oregon winery sales to all channels in 2022 in all markets (including wholesale, retail, direct-to-consumer, and export) were 5,717,159 bottled, 9L cases with revenues of approximately \$956,424,300 million. Shipments of bottled wine out of state totaled 3,438,871 9L cases in 2022. A critical issue for the Oregon wine industry is how large a profit shift results from the DTC channel increasing or decreasing its share, including volume and the number of consumers accessing online sales versus classic brick-and-mortar retail. DTC sales from wineries realize the total retail value of the wine, whereas selling to wholesalers or retailers requires a discount to allow for their margins.

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Figure 3: Total Winery Revenues for Oregon Wine, All Channels, 2014 to 2022



Source: University of Oregon/Oregon Wine Board Vineyard and Winery Survey

Table 3 shows that in 2019, Oregon wineries sold 21.9 percent of their bottled wine direct-to-consumer (DTC) via tasting rooms, wine clubs, events, catalog/mail, or website sales.

In 2022, that percentage fell to 19.3%; while club and internet direct sales continued to grow, other channels increased volume with post-pandemic reopening, and tasting rooms failed to regain their pre-pandemic volume. Tasting room sales were 45 percent of DTC sales in 2022, vs. 62% in 2019. Approximately 38.3 percent of all direct-to-consumer sales were through wine clubs in 2022, up from 2019 at 27.7 percent. DTC and national distribution (outside Oregon) account for almost 80 percent of 9L-equivalent sales, a trend that has held steady since 2018.

Table 3: 9L Equivalent Sales (Cases or 9L), Oregon, 2018-2022

	2018	2019	2020	2021	2022
Winery Revenues					
9L Totals	4,147,495	4,666,599	4,698,467	5,295,226	5,717,159
Tasting Room	568,070	632,807	254,660	437,312	497,393
Tasting Room % of Total	13.7%	13.6%	5.4%	8.3%	8.7%
Wine Clubs	264,552	283,937	356,328	379,889	423,070
Club % of Total	6.4%	6.1%	7.6%	7.2%	7.4%
Internet or Phone	90,088	104,664	136,516	167,120	182,949
Internet/Phone % of Total	2.2%	2.2%	2.9%	3.2%	3.2%
DTC Subtotal	922,710	1,021,408	747,504	984,321	1,103,412
DTC % of Total	22.2%	21.9%	15.9%	18.6%	19.3%
Wholesale/trade within Oregon	650,182	732,168	757,995	813,661	886,160
Wholesale % of Total	15.7%	15.7%	16.1%	15.4%	15.5%
National (outside Oregon) Wholesale	2,373,214	2,689,686	2,933,646	3,216,910	3,438,871
National % of Total	57.2%	57.6%	62.4%	60.8%	60.1%
International and Private Label	201,389	223,337	259,322	280,335	288,717
International/Private % of Total	4.8%	4.8%	5.6%	5.1%	5.1%

Source: University of Oregon Winery and Vineyard Survey, data in red % changes are less than the previous year, and data in green % changes are gains of the prior year.

The strong presence of DTC sales is due to the rebound in wine tourism, more significant investments in direct marketing, and committed managers and workers in tasting rooms and wine club sales. However, DTC's share of overall sales declined because Oregon did an even

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better job utilizing distribution throughout the 3-tier system across the U.S. as demand increased for Oregon wines.

Oregon's international wine exports to other countries totaled 162,939 cases (9L equivalents) in 2022 and remain a minor portion of Oregon wineries' markets. Sales to other parts of the United States were 60.1 percent of the 9L equivalent sales in 2022 for Oregon wineries (57.6 percent in 2019), providing a domestic market outside Oregon and extending the state's supply chain for wineries and vineyards. When assessing the jobs and wages supported by winery and vineyard revenues, it helps to consider the critical skills and roles in typical vineyard and winery operations.

Jobs at Wineries and Vineyards: Wages and Worker Skills

This report edition considers occupations worked by vineyard and winery employees. Oregon Wine Board (OWB) recently commissioned the 2023 Oregon Wine Labor Survey⁵ to benchmark what specific occupations at wineries and vineyards are paid and other labor-market data. Labor markets have changed across Oregon as a legacy of the pandemic to 2022 and beyond. We see that shadow effect in Tables 9 to 11, with fewer revenues, jobs, and slower wage growth. Three phenomena have changed the availability of workers:

- Workers leaving the labor force: due to health, retirement, and other reasons, workers available after 2019 (pre-pandemic benchmark) have not come back in full in Oregon;
- Workers moved away from Oregon, or the wine-industry portion of the state economy; and
- Immigration changed such that the flow of additional labor was slowed, and the supply of workers contracted.

Changing labor-market conditions altered how wineries and vineyards considered using labor and increased the number of hired workers. Vineyards and wineries tend to hire with specific job skills. The typical vineyard or vineyard management operation and its use of workers is shown in Table 4. Average wages are shown as of 2022 for perspective on costs per worker in Tables 4 and 5. These data blend official data from the federal Bureau of Labor Statistics (BLS), data from IMPLAN® estimations of labor markets for economic impact modeling, and the survey conducted on behalf of Oregon Wine Board in 2023 on labor market costs and conditions.

Vineyard jobs tend to be a blend of vineyard management jobs (vehicle operators, grounds or land maintenance, and repair workers) and classic, temporary harvest workers. Like other businesses, office jobs and sales positions may also exist.

⁵ See https://industry.oregonwine.org/wp-content/uploads/sites/2/OWS23_Salary-Survey_Jeff-Peterson.pdf for an overview of this survey's results.

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Table 4: Vineyard Occupations, Proportion of Industry Hiring and Estimated Monthly Wages, 2022

Occupation	% of Workers	Average Annual Salary/Wage
Vineyard Workers	84.3%	\$27,000
Labor Crew Supervisor	3.6%	\$35,435
Material Moving Workers	2.0%	\$27,000
Retail Sales Workers	1.6%	\$27,000
Vineyard Managers	1.4%	\$67,223
Grounds Maintenance Workers	0.8%	\$27,000
Financial Clerks	0.8%	\$34,284
Office and Administrative Support Workers	0.7%	\$27,000
Site Foreman	0.7%	\$52,920
Motor Vehicle Operators	0.6%	\$27,000
Vehicle and Mobile Equipment Install, Mechanics and Repairers	0.6%	\$35,165
All Others	2.9%	\$46,459
Totals or Average Wage/Salary	100.0%	\$28,720

Sources: Bureau of Labor Statistics (OEWS), [2023 Oregon Wine Labor Survey](#) and IMPLAN®, Oregon's minimum wage was \$13.50 after July 1, 2022.

Within a winery, there may be jobs for those who sell harvested grapes in bulk rather than processed in the winery, as well as people who supervise vineyard operations and maintenance. For wineries, many occupations are like those in other manufacturing facilities. Jobs include vehicle operators (forklifts and trucks, for example), tasting room staff, classic production workers on a bottling line, sales and design workers in brand management, cooks for wineries with event operations, a commercial kitchen or restaurant facilities, and managers. The typical winery operation in Oregon and its use of labor is shown in Table 5.

Table 5: Winery Occupations, Proportion of Industry Hiring and Estimated Monthly Wages, 2022

Occupation	% of Workers	Average Annual Salary/Wage
Winery Production Occupations	18.5%	\$59,632
Tasting Room Staff	14.6%	\$34,710
Material Moving Workers	8.7%	\$51,320
Wine Club Manager	5.2%	\$52,475
Motor Vehicle Operators	4.3%	\$57,866
Maintenance and Repair Occupations	4.3%	\$74,149
Tasting Room Managers	3.9%	\$51,435
Retail Sales Workers	3.4%	\$30,703
Cooks and Food Preparation Workers	3.1%	\$35,247
Events Managers	3.1%	\$56,010
Direct to Consumer (DTC) Sales	2.8%	\$75,530
General Managers and Executives	2.4%	\$104,352
All Others	25.7%	\$98,020
Totals or Average Wage/Salary	100.0%	\$64,659

Sources: Bureau of Labor Statistics Occupation and Wage Survey (OEWS), [2023 Oregon Wine Labor Survey](#) and IMPLAN®

Economic Impact of Oregon Wine Industry 2022

The 2023 Oregon Wine Labor Survey provided benchmark data for specific jobs in vineyards, winery, and tasting room settings. Some differences may exist because this survey's data is a sample, and our results below are industry-wide. Tables 4 and 5 use some of the 2022 data the Labor Salary Survey provided when occupations matched surveyed workers.

Some critical conclusions provided by the 2023 Wine Labor Survey for Oregon's wine industry to monitor are as follows:

- Direct to Consumer (DTC) sales positions are paid more than club or tasting room managers, suggesting wineries set a premium on DTC specialists;
- Regional and national sales positions are similar in pay;
- Executive winemakers make less than executive positions otherwise; and
- Vineyard managers make approximately 80 percent more than crew supervisors in the vineyard.

Why Tracking Occupations Matters

When considering the types of workers needed and to be recruited, wineries and vineyard owners and managers have faced challenges since the pandemic. Workforce development for agricultural and production jobs and commercial maintenance jobs that work on complex equipment provides trained workers who become employed across Oregon. A continued shortfall in available workers can increase business costs quickly and put smaller wineries at more risk. Rising search costs, wages, and other hiring costs are like a regressive tax on smaller businesses. Continuing to pursue and publish the Oregon Wine Labor Survey helps benchmark wages and salaries and should help hiring decisions across the industry.

Distribution (Wholesalers, brokers, importers)

Direct Employment: 401 jobs

Total Wages: \$20,546,500

Total Revenue: \$590,031,400

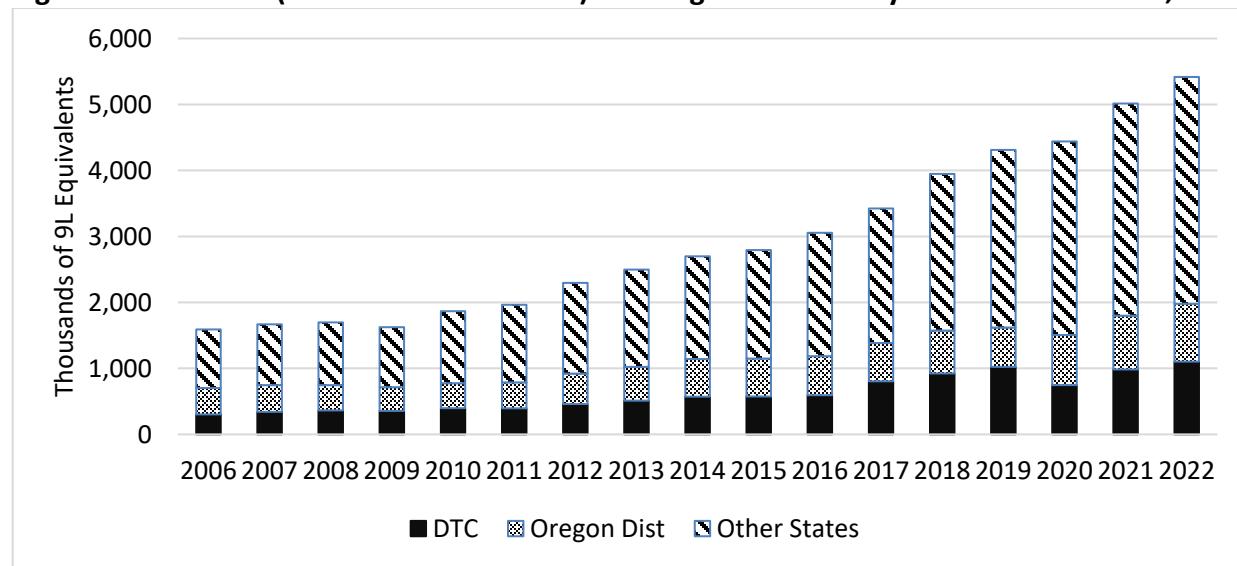
Most wines from other states and many Oregon wineries are sold through the "three-tier system" for legal, management, and economic reasons. Winery shipments move to distributor-wholesaler businesses that sell to the retail and restaurant tiers (off-premise and on-premise sales).⁶ Figure 4 shows the case-sales progression from 2006 to 2022 and the destination of 9L equivalent sales in the United States for Oregon wineries.

⁶ Wineries may also sell directly to retail-tier accounts within their own state, skipping the wholesale tier. Less than 3% of all Oregon winery volume is sold in this manner. Full Glass Research (FGR) uses a proprietary model that combines Oregon Liquor Control Commission (OLCC), University of Oregon, NielsenIQ scan data, and SipSource wholesale data to track distribution revenues.

Economic Impact of Oregon Wine Industry 2022

Our team considers multiple data sources when estimating wine distributed to off-premise and on-premise retailers. Our survey results, as shown above, provide one source of data. Another source is Wine and Spirit Wholesalers of America (SipSource), which provided our team with wholesale data (previously unavailable at the state level), as well as Nielsen point-of-sale scan data and Full Glass Research (FGR) estimates. Since 2011, this report has used an amalgam of sources and survey data to finalize sales estimates through channels and 9L-equivalent pricing to refine conclusions from the University of Oregon's annual survey work. The contraction in on-premise channels (restaurants, hotels, etc.) and the simultaneous increase in off-premise retail sales roughly offset each other in most U.S. markets.

Figure 4: Case Sales (Thousands of 9L Cases) for Oregon Wineries by Destination Market, 2006-22



Source: OLCC data for 2022 and the University of Oregon Winery and Vineyard Report. DTC sales include tasting room, club, web, and mail sales to consumers inside and outside Oregon.

From 2019 to 2022, some changes in selling Oregon wine from distribution to retailer tiers (both off-premise and on-premise) include:

- A decline in on-premise consumption, which we see in the indirect, induced, and restaurant jobs and wage impacts overall in Oregon;
- An increase in grocery channel wine sales, as the pandemic affected where consumers in Oregon purchased wines;
- Some decline in more extensive club retailer sales and
- Increases in mass market and convenience store sales.

The wholesale tier acts as a conduit to the broader market for Oregon wineries, but this tier also connects Oregon consumers with wines from around the world. The wholesale tier adds value to the winery supply chains by providing delivery, bill collection, warehousing, and promotion services. Wineries discount their wines substantially when selling to distributors,

Economic Impact of Oregon Wine Industry 2022

giving space for price mark-ups to pay for and profit from these value-added services. The significant distributors in Oregon are privately held, so there is little specific public information about the distribution tier. Jobs in distribution, retail (off-premise), and restaurants (on-premise) are estimates based on the value-added services provided by our estimates of wine sales in those channels.

Total Retail and Restaurant Level Wine Sales in Oregon (all sources)

Direct Employment: 9,294 jobs

Total Wages: \$264,296,100

Total Revenue⁷: \$1,085,308,500 from all off-premise and on-premise retailers excluding wineries

Retail store and restaurant sales are the final links in the chain from grapes to consumer and the most critical channels for wine sales overall, although, for many small wineries, direct-to-consumer (DTC) sales outweigh them. The two main categories for retail sales outside of DTC are (1) on-premise (wine bars, hotels, restaurants, etc.); and (2) off-premise (retail stores ranging from fine wine shops to large chains including warehouse stores). Off-premise sells far more volume; post-pandemic, it typically ranges from 85 to 90% of the total retail tier volume. However, its share of total retail dollar sales is less, primarily due to the difference in profit margins (restaurant markups are typically five or more times higher than stores). Higher margins and revenues in the on-premise channels mainly impact retail-tier revenues, jobs, and wages as value-added services and incomes; the impact on the wholesale and winery tier revenues is much lower.

As in the distributor tier, Oregon wineries face competition outside the state for menu space, on-premise wine lists, and shelf space in retail stores. Since Oregon wines are not generally sold in the high-volume, low-priced segments, Oregon wine represents approximately 11% of wine volume sold in the retail tier in Oregon. Due to its higher average price and production inside Oregon, its share of retail tier revenues and economic impact is much higher.

Tourism⁸

Direct Employment: 8,806 jobs

Total Wages: \$318,636,200

Total Revenue: \$758,466,800

In this 2022 report, we look more closely at tourism data. Tourism related to the wine industry resulted in estimated expenditures of \$758.4 million in 2022 (\$893.6 million was estimated

⁷ These data are from SipSource based on wholesale transactions with different retailers in 2022.

⁸ See <https://industry.traveloregon.com/resources/research/oregon-travel-impacts-2003-2022-dean-runyan-associates/> for more on the Oregon tourism industry and aggregate data for the state overall.

Economic Impact of Oregon Wine Industry 2022

throughout the state in 2019 as related to the wine industry in Oregon). This estimate includes spending on hotel stays, food, entertainment, transportation, retail, and other businesses while visitors are in Oregon before and after visiting wineries. The \$758.4 million does not include winery tasting room revenues to avoid double-counting. We estimate over 3,682,700 visitors to Oregon's wineries using a combination of consultant studies for Travel Oregon, our 2023 survey results, and Community Benchmark's estimates from their clients in the aggregate (see more details below).

It is essential to recognize that tourism gains from the Oregon wine industry are statewide, as tourists visit wineries and access other tourism assets from any of Oregon's 36 counties. The following subsection provides more details about visitor spending and patterns in Oregon.

Tourism and the Oregon Wine Industry: Deep Dive

Oregon's economy, according to Dean Runyan Associates⁹, experienced growth of visitor spending by \$1.035 billion from 2019 to 2022 to over \$13.8 billion, supporting 1,110 **fewer** jobs from 2019 to 2022 for a total of 117,400 workers in 2022. Dean Runyan Associates (DRA) is a leading firm that tracks tourism in multiple states, including Oregon. DRA studies act as a standard for tourism data across many states, including California. We used another study commissioned by Travel Oregon by Destination Analysts¹⁰ for data on how visitors spent their time in Oregon, how long they stayed, and how much was spent per day.

Destination Analysts' study suggested that 14.3 percent of visitors to Oregon visited a winery between 2021 and 2022. Approximately 97.1 percent of visitors from outside Oregon are from other parts of the United States (the remainder represents international visitors). It was estimated that 36.9 percent of visitors from outside Oregon went to a winery when on a guided tour, but only 7.4 percent of total visitors booked a guided tour. Destination Analysts' sample was approximately 10 percent "day trippers" (Oregonians traveling in-state) from inside Oregon and 90 percent traveling from outside and originating from all over the world.

The number of people per party was 2.2 adults; Dean Runyan estimates that visitors across Oregon have an average stay of 2.1 days. The per-person spending level was approximately \$365.40, where we estimated that 75 percent of a group of four would visit a winery on average (for every three adults 21 and over, there would be one child). According to Destination Analysts, that gave us \$273.25 per person per day and 3,682,755 visitors to wineries from over 23,056,990 million people who visited Oregon in 2022. These data helped generate the estimate of \$758.4 million in tourism spending related to winery visits.

⁹ See https://industry.traveloregon.com/wp-content/uploads/2023/06/OR_2022_2023-05-24.pdf for more.

¹⁰ See <https://industry.traveloregon.com/wp-content/uploads/2023/06/Travel-Oregon-Visitor-Profile-2021-22-Statewide-Report-of-Findings-rev.-6.23.pdf> for more.

Economic Impact of Oregon Wine Industry 2022

This spending supported over 8,800 jobs, paying over \$318.6 million in wages across Oregon. Winery-related regional expenditures by visitors to Oregon's wineries were concentrated in five significant counties: Yamhill, Hood River, Jackson, Marion, and Washington. Regional spending depends on regional assets to service visitors; thus, more rural counties may have wineries but may lack the broad base of restaurants, retail, and hotels that attract visitor spending.

The proportion of total spending in significant categories is also critical in helping determine the broader economic impacts of travel spending. We used the following assumptions as a mix of the Dean Runyan and Destination Analysts data sources:

- 20.8 percent was for hotel or overnight stay spending, including short-term rentals (such as Airbnb and VRBO) outside any winery overnight properties;
- 26.8 percent was restaurant spending outside a winery setting;
- 52.4 percent of retail and other services (outside a winery tasting room or wine-industry-related property tour) completed the out-of-pocket expenditures.

Notice that the jobs supported and tourism spending by those who visited wineries in Oregon have increased since the 2019 report. That \$758.4 million estimate for 2022 reflects the tourism roller-coaster since 2019; our last two reports on Oregon's wine industry provided estimates of \$786 million in 2016 and \$900 million in 2019. Also, these data are not adjusted for inflation; as prices have increased, visitors are paying more and generating more aggregate revenue. Our estimate of 8,806 wine tourism-related jobs compares to 8,600 in the 2019 report and 7,625 in 2016. Jobs and wages have increased as Oregon's tourism businesses try to return to pre-pandemic revenue levels.

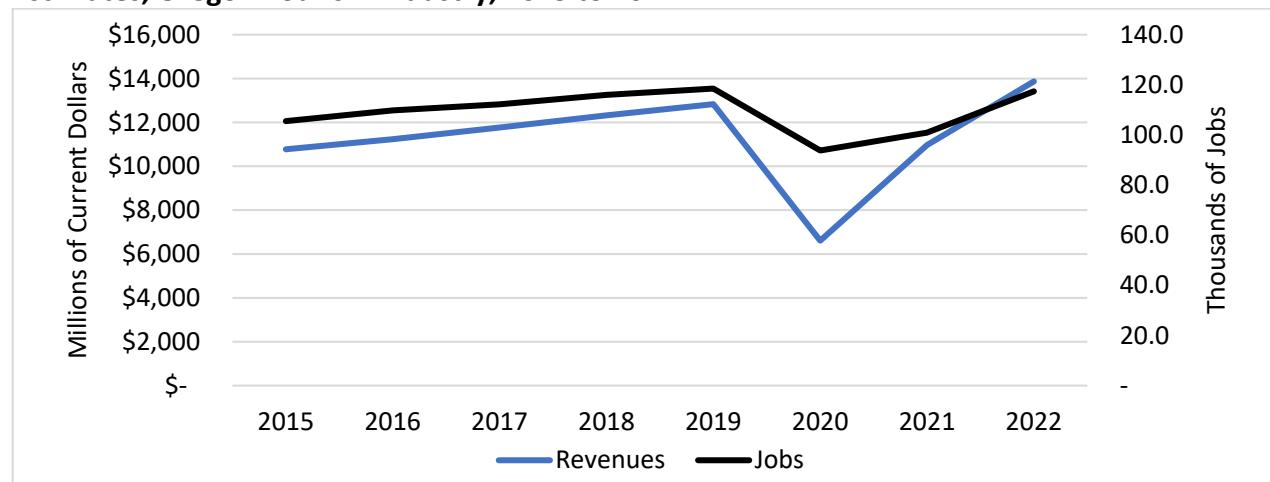
Figure 5 shows Dean Runyan's estimate of travel spending and jobs that support visitors as of 2022. These data provide a way to consider how travel spending has changed since 2015, a trend disrupted by the pandemic and visitors coming back through marketing efforts for outdoor sites, hiking, food trails, and winery visits (see <https://traveloregon.com/> for more and the latest efforts). Such partnerships also help the continued growth of Oregon's wines in national markets.

Our final stop in this tourism-focused section is how visitors to wineries spend when on-site. The Oregon Wine Board (OWB) is partnering with Community Benchmark (see <https://communitybenchmark.com/> for more) to monitor visitor and sales-channel spending. Community Benchmark is building a client base with 120 tasting rooms at wineries surveyed in its sample as of 2022.¹¹ Figures 6 and 7 show two perspectives on the Community Benchmark data for Oregon wineries from 2022.

¹¹ Approximately 10.75 percent of our winery count, though not all wineries have tasting rooms.

Economic Impact of Oregon Wine Industry 2022

Figure 5: Business Revenues (Millions of Current Dollars) and Jobs (Thousands of Jobs) Estimates, Oregon Tourism Industry, 2015 to 2022

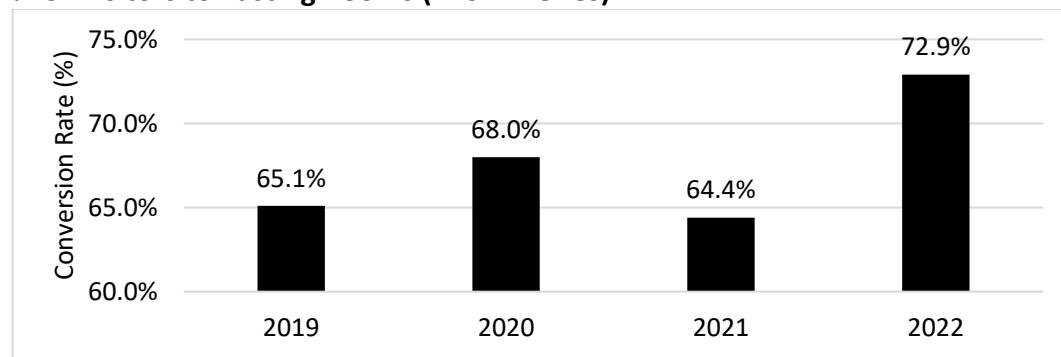


Source: Dean Runyan Associates, The Economic Impact of Travel for Oregon, 2022 (preliminary)

Community Benchmark data in 2022 provides metrics to watch as a link between tourism and tasting room sales. The purchase conversion for 2022 was 72.9 percent of visitors that came to a winery tasting room into some revenue generation, with an average order value (AOV) of \$98 per visitor in 2022. The conversion rate is much like a tasting-room sales efficiency score: once visitors enter the tasting room, do they become customers regarding bottled wine sales?

Figure 6 looks at Community Benchmark's annual average data on conversions since 2019.

Figure 6: Conversion Rates of Visitors to Sales, Community Benchmark, 2019 to 2022, % of Visitors to Tasting Rooms (120 wineries)



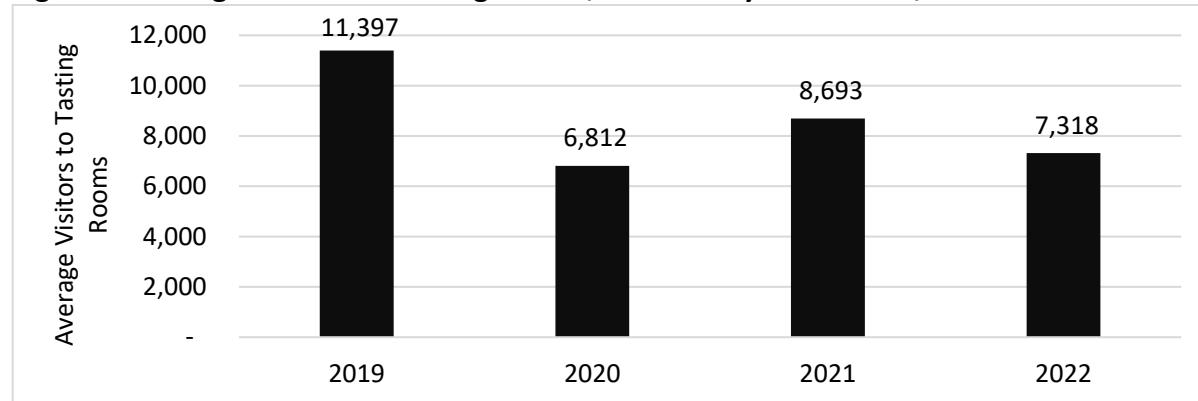
Source: Community Benchmark via Oregon Wine Board

Figure 7 shows the average number of visitors to tasting rooms from Community Benchmark's sample. This is also an important metric to monitor. The visitor flow into winery tasting rooms provides more sales at the entire retail markup for Oregon wineries and a more complete, vertical integration of winery production and marketing into sales on-site to help capitalize on winery investments. Visitors become marketing targets for wineries with event facilities beyond the winery's bottled products.

Economic Impact of Oregon Wine Industry 2022

The number of business and international travelers has been reduced since the pandemic, a gap that may persist throughout this decade. Figure 7 shows the breakout and then flattening after 2020 regarding visitor flow. The significantly higher conversion rate in 2022 (see Figure 6) explains the increase in DTC sales revenues. The challenge is increasing visitors to Oregon's wineries and creating marketing ambassadors of visitors at a time when state visitor totals remain below pre-pandemic levels.

Figure 7: Average Visitors to Tasting Rooms, Community Benchmark, 2019 to 2022



Source: Community Benchmark via Oregon Wine Board, the number of observations was 100 in 2019 and 2020, 120 in 2021 and 2022

Direct Economic Impacts Review: Jobs and Wages

Table 6 summarizes the critical direct economic impact figures for employment and wage levels. The production and sale of wine require employment in vineyards, wineries, distribution, retail, and restaurants. The direct employment impacts are at least 15,332 jobs within Oregon (-0.7 percent from 2019), generating over \$545 million in gross payroll (+33.2 percent from 2019).

Table 6: Wine Industry Direct Employment and Wages Estimates, 2019 and 2022

Industry	2019 Employment (Empl)	2019 Wages	2022 Employment (Empl)	2022 Wages	2019-22 % Change Empl	2019-22 % Change Wages
Vineyard	1,443	\$49,650,700	1,660	\$61,710,500	15.0%	24.3%
Winery	3,687	\$136,565,500	3,977	\$198,507,000	7.9%	45.4%
Distribution/Wholesale	405	\$18,306,800	401	\$20,546,500	-1.0%	12.2%
Grocery/chain stores	1,833	\$52,588,100	2,165	\$70,485,900	18.1%	34.0%
Wine store employees	1,547	\$37,534,800	1,335	\$38,933,900	-13.7%	3.7%
Eating and drinking places	6,532	\$114,692,300	5,794	\$154,876,300	-11.3%	35.0%
Totals	15,447	\$409,338,200	15,332	\$545,060,100	-0.7%	33.2%

Sources: Bureau of Labor Statistics, IMPLAN® EFA, and Full Glass Research

Average wage growth in Oregon between 2019 and 2022 surged due to rising inflation, industry growth, and sustained worker demand. Employment and wage changes have disconnected due to labor supply issues and worker demand for higher wages to outpace rising consumer prices.

Economic Impact of Oregon Wine Industry 2022

For vineyards and wineries, rising wages are likely due to industry growth, more educated staff providing those services for owners, and more competitive labor markets for harvest workers across the western United States between 2019 and 2022.

The annual salaries for full-time vineyard and winery employees are probably significantly underestimated. The BLS statistics do not include owners of businesses who are neither on payroll nor other non-salaried family members. For certain agricultural companies, these can be a significant number of individuals and dollars, especially in Oregon, with its many small family-owned wineries and vineyards. Part-time and seasonal workers are converted to “full-time” equivalent workers based on payroll survey data and hours worked per worker annually. Wholesale and retail employment impacts are modeled based on wine sales’ share of total tier/channel revenues for those industries.

Ties to complementary industries expand the economic impact of the wine industry and provide revenues and jobs in allied industries that would not have the same revenue levels but for the wine industry’s presence in Oregon.

ALLIED INDUSTRIES

We have analyzed separately a number of the industries that are related to the wine industry due to its presence. For example, vineyard and winery development, design, and maintenance businesses and jobs would not exist if grape vineyards and wineries were not in Oregon at a scale that supported them. Further, vineyard development can be a two- to five-year process from raw dirt to bearing vineyards, which suggests incomes are made by the allied industries before vineyard owners or wineries generate subsequent revenues. Table 7 shows results in summary form; these industries generated an additional \$15.2 million in business revenues (+7.1 percent from 2019).

Table 7: Allied Industry Business Revenue Summary, Wine Industry Impact, 2019 and 2022

Industry	Direct Impact 2019	Direct Impact 2022
Vineyard Development	\$26,780,000	\$39,719,700
Vineyard Maintenance and equipment	\$71,058,100	\$77,640,000
Winery Maintenance, equipment, tanks, infrastructure	\$26,665,200	\$34,530,700
Glass, corks, closures, packaging	\$7,904,800	\$12,283,100
Trucking, Shipping, Warehousing	\$34,444,700	\$33,495,200
Professional Services - banking, insurance, accounting, consulting, etc.	\$30,706,700	\$21,746,700
Printing (including wine labels)	\$10,630,900	\$6,062,200
Research and Education	\$7,335,000	\$5,284,200
Totals	\$215,525,400	\$230,761,800

We used IMPLAN® to identify specific allied industry changes. We estimated changes from 2019 to 2022 in production and acreage, incomes, jobs, and wages to calculate the 2022 effects on these industries specifically, as shown in Table 7. Other industries' revenues are more tied to the cost of goods sold (e.g., tanks, trucking, warehousing) by wineries or administrative and marketing expenses (e.g., printing and professional services).¹² These industries serve the wine industry in Oregon because there is enough scale for these businesses to have specific lines of business and personnel to serve the wine industry directly. The wine industry's presence and charitable contributions also support research and education efforts from enology and viticulture to marketing and business research.

Survey Data

As in past iterations of this report, EFA again distributed a survey to wineries, vineyard owners, and vineyard managers in partnership with the Oregon Wine Board (OWB). The survey focused on expanding the available data perspectives about wine industry incomes, costs, employment, charitable contributions, harvest yields, and channels for sales. Our survey results helped inform and corroborate some of the official estimates used and also created assumed levels of visitors and charitable contributions from Oregon's wineries and vineyards. We promised and maintained the anonymity of surveyed businesses regarding how results were reported. Major data sections include:

- Vineyard and Winery Demography (location, size, and yields);
- Winery Production and Sales;
- Vineyard Production and Sales; and
- Winery and Vineyard Costs and Charitable Contributions.

Survey Demographics

The survey instrument began with questions on business location and type. Wineries, vineyard owners, and vineyard managers were asked to answer this survey in all Oregon counties when applicable. Respondents were from the following counties, in order of most to least respondents (there were 44 viable responses from those surveyed or 2.1 percent, assuming a universe of 2,010 independent vineyard and winery businesses):

Counties with wineries: Yamhill; Umatilla; Douglas; Benton; Jackson; Deschutes; Washington; Polk; Hood River; Josephine; Lane; Marion; Clackamas; Multnomah;

Counties with vineyards: Yamhill; Douglas; Clackamas; Josephine; Polk; Jackson

¹² We have removed "Winery and Agricultural Inputs" as shown in past reports due to a lack of precise data sources and now count those impacts generally in our estimates of indirect impacts.

Economic Impact of Oregon Wine Industry 2022

Our summary of survey results describes the range of answers and some conclusions drawn. Because aggregate outcomes or averages from the aggregate activity are of greatest importance to the research outcome, we considered results at the county level, further protecting and securing respondent anonymity.

Survey Results: Winery Production, Sales, and Income, 2022

The number of 9L case equivalents ranged from 97 to over 832,000 9-liter equivalents based on gallons produced in a county. Sales volumes ranged from 50 to 772,351 9L equivalent units for a county regarding responses. The ratio of full-time to part-time workers in wineries was typically 3 to 1 respectively. Tasting room visits ranged from less than 100 for the year to over 128,000 in 2022. The median number of visitors to a winery tasting room (for those surveyed who identified as having a tasting room) was 5,000 in 2022. Questions on sales channels showed the diversity of Oregon wineries and strategy on sales; direct-to-consumer (DTC) channels ranged from five to 25 percent of sales, and classic distribution ranged from one percent to 70 percent of the winery's 9L-equivalent sales in some counties. Prices in DTC channels ranged between \$240 per 9L-equivalent case to \$480 per case (\$20 to \$40 per 750 ml bottle); distribution freight-on-board (FOB) pricing, a typical wholesale price indicator, ranged between \$84 to \$204 per case for the same wineries (\$12 to \$17 per 750 ml bottle). This range helps us estimate a winery's retail markup in DTC sales versus its wholesale price to distributors, which is additional revenue wineries keep as if they are retailers.

Payroll expenses were 23.8 percent of operating expenses on average for wineries, with marketing expenses around four percent of operating expenses in 2022. Charitable contributions by wineries were a mix of cash and in-kind wine contributions. These ranged from \$1,000 to \$100,000 in cash and over \$180,000 in in-kind value of donated wine. This type of support adds indirectly to this industry's economic impact on Oregon's economy.

Survey Results: Vineyards and Vineyard Management, 2022

We asked vineyard owners, vineyard managers, and wineries that own vineyards questions about vineyard operations in Oregon. Vineyard owners and managers who responded reported an average of \$1,500 to \$3,700 per ton. The University of Oregon vineyards survey suggested the median price of harvested grapes was approximately \$2,353 per ton (\$2,225 in 2019). The University of Oregon also showed an average of 3.36 tons per acre in 2022 (up from 2.97 on average in 2019), ranging from 2.09 tons per acre in Rogue Valley to 3.48 tons per acre in Umpqua Valley.¹³

¹³ These areas are part of "All Others" in the Appendix when we consider economic impacts by county and region.

Economic Impact of Oregon Wine Industry 2022

The sum of the vineyard acreage stated by respondents was 1,064 harvested acres, approximately 2.6 percent of the total in the University of Oregon survey for 2022. In some cases, the average cost of planting new vineyards was as much as \$26,360 per acre for a median of \$20,000 per acre. Vineyard maintenance costs ranged from \$1,700 to \$22,000 per acre, with a median of \$7,800; all these costs are more than in 2019, reflecting a higher cost of construction and doing business. We used the \$7,800 per acre as a basis for our vineyard development estimates. Much like wineries, there was a mix of full-time and part-time workers employed for harvest and maintenance; the mix in 2022 was about 11 full-time workers for every 10 part-time workers by headcount.

Taxes & Regulation

The wine industry generates significant tax dollars, benefiting federal, state, and local governments. In Oregon, tax dollars are raised through privilege taxes, income taxes, estate and gift taxes, payroll taxes, property taxes, and other business taxes and fees, such as occupational taxes, licenses, and import duties. Wine production and sales are licensed and regulated at the state and Federal levels. In addition, vineyard and winery activities as growth takes place (obtaining permits, inspections, conforming to local ordinances, etc.) provide fees and support employment at the county level. Industry employers pay payroll taxes to federal and state governments for their employees and a percentage of their net income in the form of income taxes, which are paid at the corporate level or passed through to individuals, depending on the ownership structure. Oregon has no state sales tax. Property tax is a local government tax on property ownership. Property taxes are shown in Appendix 3 – Regional and County Impact since they are primarily used for local government. We are ready to examine the economic impact estimates using and combining the above data.

Table 8: Oregon State Taxes, Licenses, and Other Fees Directly Related to Wine, 2019 and 2022

Tax Type	Estimated 2019	Estimated 2022
Employment Taxes	\$6,227,100	\$5,525,400
Corporate Income	\$11,928,200	\$17,140,700
Personal Income	\$72,945,800	\$64,230,400
Other Taxes and Fees	\$68,055,300	\$85,907,800
Property Taxes	\$75,083,400	\$92,094,400
Total	\$234,239,800	\$264,898,700

Source: Oregon Department of Revenue, OLCC, FGR, and IMPLAN®, Oregon Transient Lodging Tax (TLT), as related to winery visits, is included in “Other taxes and Fees,” as is Oregon’s privilege tax on wine production.

Tables 9 to 11 summarize the economic impacts of the Oregon wine industry in 2022.

Total Oregon State Economic Impact

Table 9: Business Revenue Impacts, 2019 and 2022, Oregon Wine Industry

Revenue	Total Oregon 2019	Total Oregon 2022
Wine Grape Sales	\$237,784,000	\$330,026,000
Winery Sales	\$673,903,900	\$956,424,300
Distributor Sales	\$539,772,100	\$590,031,400
Retailers and Restaurant Wine Sales	\$1,199,629,200	\$1,085,308,500
Tourism	\$893,656,000	\$758,466,800
Vineyard Development	\$26,780,000	\$45,290,000
Vineyard Maintenance and equipment	\$71,058,100	\$93,075,200
Winery Maintenance, equipment, tanks, infrastructure	\$26,665,200	\$35,633,800
Tax Revenues (includes estimation for property taxes)	\$234,239,900	\$264,898,700
Wine Industry Indirect (Services and Suppliers) - IMPLAN	\$916,894,000	\$1,183,898,600
Wine Industry Induced Revenues - IMPLAN	\$911,971,100	\$1,132,629,300
Totals	\$5,732,353,500	\$6,475,682,600

Table 10: Wage and Total Economic Impacts, 2019 and 2022, Oregon Wine Industry

Wages	Total Oregon 2019	Total Oregon 2022
Vineyard Employees	\$49,650,700	\$61,710,500
Winery Employees	\$136,565,500	\$198,507,000
Distributor Employees	\$18,306,800	\$20,546,500
Tourism Employees	\$270,126,000	\$318,636,200
Wine Store Employees	\$37,534,800	\$38,933,900
Grocery and chain retail employees (wine-related)	\$52,588,100	\$70,485,900
On-premise employees (wine-related)	\$114,692,300	\$154,876,300
Wine Industry Indirect (Services and Suppliers) - IMPLAN	\$465,414,300	\$451,145,000
Wine Industry Induced - IMPLAN	\$365,658,600	\$379,266,500
Total Wages	\$1,510,537,100	\$1,694,107,800
TOTAL IMPACT (Revenue + Wages)	\$7,242,890,600	\$8,169,790,400

Table 11: Employment Impacts, 2019 and 2022, Oregon Wine Industry

Employment	Total Oregon 2019	Total Oregon 2022
Winery Employees	1,443	1,660
Vineyard Employees	3,687	3,977
Distributor Employees	405	401
Tourism Employees	8,600	8,806
Wine Store Employees	1,547	1,335
Grocery and chain retail employees	1,833	2,165
On-premise employees	6,532	5,794
Wine Industry Indirect (Services and Suppliers) - IMPLAN	8,135	8,626
Wine Industry Induced - IMPLAN	7,866	6,673
Total Employment	40,048	39,437

Measuring Net Economic Effects

We calculated total revenues, jobs supported, and wages for every significant sector impacted by vineyard harvests, wine production, and sales. Measuring the **net economic effect** of an investment choice changes the analysis when considering the integration along a supply chain. Because wineries may also be vineyard owners, part of the wine grape value shown in the economic impacts is an internal cost to a winery and does not go out to the open market. As such, the winery's overall revenue would catch that amount within its sales revenue after the grapes are processed and the wine is bottled and sold. Costs for one link in the supply chain are revenue the next, as each subsequent link in the chain "adds value" to the input purchased but does not generate the entire value of its revenue alone:

- The revenue from grape sales is also part of the winery's revenues;
- Distributor revenues include the revenues of the wineries from which wine is purchased;
- Direct sales to restaurants and retail and buying from wholesalers include revenue from those links in the supply chain.

The summary approach is more useful if a policymaker considers the breadth of effects from a policy choice affecting a specific sector (tourism) or industry tier (wholesale). Suppose a policymaker is comparing alternative policies with industry-wide effects or trying to assess the economic contributions of unrelated industries (such as construction). In that case, the net economic impact might be preferred if calculations use a similar methodology. The growth of value-added products and services of the Oregon wine industry is approximately 4.87 percent from 2019 to 2022. Table 12 shows these data.

Table 12: Net Economic Effects – Value-Added Revenues Only

Industry Tier	2016	2019	2022
Grape Grower Revenues	\$101,950,900	\$144,420,600	\$158,412,500
Net Winery Direct Impact	\$427,124,500	\$544,045,100	\$626,398,300
Net Wholesale Tier Direct Impact	\$395,713,200	\$405,843,700	\$413,022,000
Net Retail Tier Direct Impact	\$648,318,500	\$821,324,600	\$868,246,800
Subtotal	\$1,573,107,100	\$1,915,634,000	\$2,066,079,600
Indirect & Induced Net Impact (IMPLAN)	\$449,455,900	\$618,189,600	\$591,248,400
Total Net Effect	\$2,022,563,000	\$2,533,823,600	\$2,657,328,000

Appendix 1 – Impact of Oregon Wineries & Vineyards Alone

The report describes the effects of wine production and sales throughout the economy, from input and service suppliers to retail sales for all types of wine. A substantial portion of the retail and wholesale revenue and wage effects are related to the sales of wine imported into Oregon, whether from other states or countries. This appendix isolates the economic impact of Oregon-produced wine and grapes on the state economy. Table A-1 enumerates revenue, wages, and jobs derived solely from Oregon wine grapes and wine, without the impact of wine imported into the state.

Table A-1: Core Winery Supply Chain Impacts, 2022 Estimates

Sector	Revenue	Wages	Jobs
Vineyards	\$330,026,000	\$61,710,500	1,660
Wineries	\$956,424,300	\$198,507,000	3,977
Tourism	\$758,466,800	\$318,636,200	8,806
Wholesalers	\$118,006,300	\$4,109,300	80
Retail tier	\$217,061,700	\$52,859,200	1,859
Suppliers (indirect)	\$144,246,300	\$87,645,000	1,600
Induced	\$390,683,400	\$117,103,800	2,060
Oregon 2022	\$2,914,914,800	\$840,571,000	20,042

Appendix 2 – Under-reporting of Jobs & Wages in Official BLS Statistics

The jobs and wages of those employed directly by the wine industry are based on data from the Bureau of Labor Statistics. However, the BLS data for vineyard and winery jobs are certainly an underestimate due to the following factors:

- Reporting of wages and jobs to the BLS is based on participation in the unemployment insurance program. Vineyards or wineries that are too small to meet the required payroll threshold, use mostly contracted labor, or mainly family members generally do not report to the BLS. In addition, vineyard management and some agriculture companies are classified into different sectors.
- Seasonal and part-time work in the industry may cause problems estimating the number of full-time equivalent jobs when reporting to the BLS. It also reduces the estimates for salaries and wages because the BLS does not distinguish between part-time and full-time employment regarding monthly wage estimates. Thus, a part-time wage is a portion of a full-time job. Salary surveys by industry publications are 10% to 30% higher than BLS.
- Many wineries crush or bottle at other facilities; production jobs in BLS data may not be categorized as such jobs for “Wineries” but under “Other Manufacturing.”
- Wineries that own vineyards may register workers as wineries rather than vineyard workers.

Appendix 3 - County & Regional Impacts

Appendix 3 shows the economic impact of the Oregon wine industry allocated by wine-growing regions and counties. The method used to allocate these impacts by region and county varies, depending on what is being measured. In some cases (e.g., winery employment), the data is directly available from the federal Bureau of Labor Statistics at the county level. In others, state-level data has been allocated based on winery production, vineyard acreage, or other data available at the county level. IMPLAN® also acts as a source of data, as the economic impact models for each county include data on estimated income, wages, and employment for wineries, vineyards, and allied industries.

Property taxes have been included because they are a significant source of local government revenue. Also, the employment impact for distributors and some professional services has been allocated on an estimated business-revenue basis rather than actual workplace or residency. These data are intended to be used independently of the broader estimates in this report. Table A-2 shows Oregon's three major wine regions, and Table A-3 shows the county allocation; these tables take the totals from Table A-1 less indirect and induced effects and then distribute them by county and associated region in Oregon.

Table A-2: Wine Industry Economic Impacts by Region 2022

Region	Wine-Related Revenue (\$)*	Related Wages (\$)*	Related Jobs	Indirect & Induced Jobs	Property Taxes
Willamette Valley	\$2,362,048,700	\$548,374,200	15,326	9,714	\$58,472,200
Southern Oregon	\$515,917,200	\$119,775,600	3,347	2,122	\$12,771,400
Columbia Valley	\$719,200,600	\$166,969,800	4,666	2,958	\$17,803,800
All other	\$123,090,500	\$28,576,500	799	506	\$3,047,200
Oregon 2022	\$3,720,257,000	\$863,696,100	24,138	15,300	\$92,094,600
Oregon 2019	\$3,669,248,500	\$727,921,600	24,047	16,001	\$71,060,300

Note: *Wholesale and retail revenues and wages from all wine of all types/sources

Economic Impact of Oregon Wine Industry 2022

Table A-3: Wine Industry Economic Impact by County 2022

Counties	Wine-Related Revenue (\$)*	Related Wages (\$)*	Related Jobs*	Indirect & Induced Jobs	Property Taxes
BAKER	\$990,700	\$230,000	6	4	\$24,500
BENTON	\$114,352,500	\$26,548,100	742	470	\$2,830,800
CLACKAMAS	\$89,634,200	\$20,809,500	582	369	\$2,218,900
CLATSOP	\$6,849,200	\$1,590,100	44	28	\$169,600
COLUMBIA	\$1,664,400	\$386,400	11	7	\$41,200
COOS	\$21,383,400	\$4,964,400	139	88	\$529,300
CROOK	\$995,200	\$231,000	6	4	\$24,600
CURRY	\$18,277,400	\$4,243,300	119	75	\$452,500
DESCHUTES	\$49,106,100	\$11,400,500	319	202	\$1,215,600
DOUGLAS	\$132,205,100	\$30,692,800	858	544	\$3,272,700
GILLIAM	\$1,454,700	\$337,700	9	6	\$36,000
GRANT	\$3,566,200	\$827,900	23	15	\$88,300
HARNEY	\$20,300	\$4,700	0	0	\$500
HOOD RIVER	\$414,769,400	\$96,293,000	2,691	1,706	\$10,267,600
JACKSON	\$333,089,900	\$77,330,300	2,161	1,370	\$8,245,600
JEFFERSON	\$3,448,200	\$800,500	22	14	\$85,400
JOSEPHINE	\$50,622,200	\$11,752,500	328	208	\$1,253,100
KLAMATH	\$6,207,900	\$1,441,200	40	26	\$153,700
LAKE	\$1,950,500	\$452,800	13	8	\$48,300
LANE	\$167,471,100	\$38,880,200	1,087	689	\$4,145,700
LINCOLN	\$2,183,700	\$507,000	14	9	\$54,100
LINN	\$31,504,300	\$7,314,100	204	130	\$779,900
MALHEUR	\$371,900	\$86,300	2	2	\$9,200
MARION	\$303,343,900	\$70,424,400	1,968	1,247	\$7,509,200
MORROW	\$1,045,000	\$242,600	7	4	\$25,900
MULTNOMAH	\$124,685,300	\$28,947,000	809	513	\$3,086,600
POLK	\$232,333,400	\$53,938,600	1,507	955	\$5,751,400
SHERMAN	\$1,791,800	\$416,000	12	7	\$44,400
TILLAMOOK	\$843,500	\$195,800	5	3	\$20,900
UMATILLA	\$89,531,300	\$20,785,600	581	368	\$2,216,300
UNION	\$2,079,300	\$482,700	13	9	\$51,500
WALLOWA	\$1,742,500	\$404,500	11	7	\$43,100
WASCO	\$210,608,400	\$48,894,900	1,366	866	\$5,213,600
WASHINGTON	\$292,025,600	\$67,796,800	1,896	1,201	\$7,229,000
WHEELER	\$1,410,400	\$327,400	9	6	\$34,900
YAMHILL	\$1,006,698,400	\$233,715,500	6,534	4,140	\$24,920,700
OREGON	\$3,720,257,000	\$863,696,100	24,138	15,300	\$92,094,600

Note: *includes wholesale and retail impact from all wine of all types/sources, plus tourism

Source Data and Methods

- Wine Grape Sales: University of Oregon Winery and Vineyard Surveys (2019 to 2022)
- Winery Sales: University of Oregon Winery and Vineyard Surveys (2019 to 2022), Community Benchmark, Full Glass Research Winery Revenue model.
- Distributors' Sales (in Oregon): University of Oregon Winery and Vineyard Surveys (2019 to 2022) and Oregon Liquor Control Commission (OLCC), SipSource, and Full Glass Research (FGR) Distribution Model
- Retailers and Restaurant Wine Sales (in Oregon): FGR Distribution Model and Nielsen
- Tourism: Dean Runyan Associations and University of Oregon Winery and Vineyard Surveys (2019 to 2022) and FGR Tourism Model, Community Benchmark
- Vineyard Development: IMPLAN, survey data, and Quarterly Census of Employment and Wages (QCEW)
- Vineyard Maintenance and equipment: IMPLAN, survey data and QCEW
- Winery Maintenance, equipment, tanks, infrastructure: IMPLAN
- Winery & Agricultural inputs: IMPLAN
- Glass, corks, closures, packaging: IMPLAN
- Trucking, Shipping, Warehousing: IMPLAN
- Professional Services - banking, insurance, accounting, consulting, etc.: IMPLAN
- Printing (including wine labels): IMPLAN
- Tax Revenues (includes estimation for property taxes): Estimated from business revenues above by IMPLAN model
- Government fees and direct funding: Estimated business revenues above by IMPLAN model
- Other Indirect effects: Estimated from business revenues above by IMPLAN model
- Wine Industry Induced Revenues: Estimated from business revenues above by IMPLAN model
- Wages: QCEW, BLS, 2023 Oregon Wine Salary Survey (from OWB), IMPLAN

Employment and wage data for all line-item industries come from the Bureau of Labor Statistics and the IMPLAN estimates for indirect and induced industries. We also used the 2023 Oregon Wine Labor Survey to benchmark wage data for specific occupations in vineyards and wineries. Data on costs of goods sold, employment levels, and revenues for vineyards and wineries provided additional data and a second source to corroborate IMPLAN estimates for 2022 data when needed.

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About Economic Forensics and Analytics, Inc. (EFA)

Economic Forensics and Analytics, Inc. (EFA) is an independent research and consulting firm located in Sonoma County, California. Since 2000, EFA has provided clients with customized economic analysis at reasonable costs compared to competitors. We have a wide range of clientele in the private and public sectors across the United States and Canada. For government and businesses alike, EFA provides economic forecasting and economic impact analysis using the latest data and a proven method of describing the effects of decisions. EFA president Robert Eyler has a doctorate in economics from the University of California at Davis. See more at www.econforensics.com.

About Full Glass Research (FGR)

Full Glass Research, founded by Christian Miller in January 2005, is dedicated to consumer, market, and economic research in the wine and food industries. In addition to consulting and research for private and government clients, Full Glass Research also helped found and continues to advise the Wine Opinions national trade and consumer panels. Christian Miller has worked in the wine and food industries since 1983. He earned his undergraduate degree in Economics from Franklin & Marshall College in 1980 and an M.B.A. from Cornell University in 1985, followed by successive research and management positions at Kendall-Jackson and Sebastiani Vineyards. His experience includes working with both small and large companies, as a negotiator, and brand manager, in operations analysis and market research. Before starting Full Glass Research, he was Director of Research at MKF, a leading CPA/Consultant firm in the wine industry. He was a founding Wine Market Council's Research Committee member and currently co-manages the OIV Wine Marketing Program at the University of California, Davis. Full Glass Research can be reached at www.fullglassresearch.com.

About the Oregon Wine Board (OWB)

The Oregon Wine Board is a semi-independent state agency established in the following [Oregon statute](#). The Oregon Wine Board manages marketing, research, and education initiatives that support and advance Oregon's statewide wine and wine grape industry.

The Oregon Wine Board can be reached at www.oregonwine.org or info@oregonwine.org