

## Ithaca 2018 Abstract Submission

### Title

Challenges in Valuing Mergers and Control-Oriented Acquisitions in the Wine Industry by Kevin J. Fandl, Sherry L. Jarrell\*, and Wayne W. Williams

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### Keywords

new valuation measure, mergers and control-oriented acquisitions, wine industry

### Research Question

This paper sets out to establish a unique tool to effectively capture the distinct valuation process for a winery during an acquisition.

### Methods

in-depth interviews with experienced wine industry deal makers; application of real options pricing to value the unique assets and strategies employed by the wine sector to compete and grow

### Results

In process: measure of the wealth creation through mergers and control-oriented acquisitions by private, family-owned vineyards domestically and abroad. Separate research shows most mergers create significant value over long run.

### Abstract

The wine industry has a significant economic impact across the globe. Worldwide wine exports topped \$32.4 billion in 2016. France lead the way at \$9.2 billion, Italy a close second at \$6.2 billion, and Chile, whose GDP is less than 2% of the United States, fourth at \$1.9 billion. The United States is currently the sixth largest exporter at \$1.6 billion, an increase of 13.3% over 2015. California's wine industry alone (including grape growing, wine production, taxes and tourism) created \$114 billion in economic activity in 2015, about 0.55% of total U.S. GDP. Retail wine sales in the United States, inclusive of imports from non-US producers, topped \$60 billion in 2016. The United States remains the world's largest consumer of wine, although Vatican City drinks more wine per capita (54.26 liters per year versus 10.25 for the U.S.) than any other.

Merger activity has been a significant driver of growth in the wine industry. Major and middle tier companies are making targeted acquisitions to broaden their portfolios and grow their businesses in an increasingly competitive environment. In addition, market growth has put pressure on supply, which results in higher vineyard values, and acquisitions by wineries that want to protect supply.

Increasing consolidations throughout the global wine sector requires an effective mechanism to value those transactions, but the wine sector is unique in how value is determined. This paper sets out to establish a unique tool to effectively capture the distinct valuation process for a winery during an acquisition. We believe this tool could help enhance value-creating managerial strategies across the entire value chain – land, viticulture, grape harvesting and sourcing, and distribution channels -- as well as guide important regulatory, labor, tax and tariff reform at the country level.

The vast majority of wine producers are private, family-owned enterprises, but typical approaches to measuring the impact of mergers on value rely on large samples of publicly available stock price and financial statement data. Most of the existing research on the performance of wine producers, therefore, utilize proprietary financial statement or survey data, subject to non-disclosure agreements. In addition, many wine sector acquisitions are in part, not whole, and the original owner often maintains an ownership share and some control in the ensuing entity, which makes it difficult to isolate the acquisition's impact on value.

There is sizable and significant merger and acquisition (M&A) activity in the wine industry. The U.S. wine industry had a record year in 2016: 23 transactions representing \$2.37 billion (see below figure, in pdf version). Given that this represents a small subset of the actual control-oriented transactions in the wine sector, the actual volume of activity is likely much higher.

The pace of M&A is increasing, with schools of new buyers formed. Conditions for takeovers in the wine industry seem ideal. Low interest rates reduce both the cost of financing and the hurdle rate for profitable mergers. Consumption is skyrocketing, with a 20-year increase topping 70%. Consumption in China, and by millennials and Gen-X, continues to grow. As a luxury good the consumption of wine is expected to rise further as the GDP of developed and developing countries increase.

Consolidation among distributors is driving wine companies to merge; larger wine companies can play a greater role in the market both domestically and internationally, as significant economies of scale are created when one large distributor can supply retailers with a wide variety of reds, whites and blends. Since the 2008 Great Recession, vineyard land value has climbed significantly, making it more lucrative for owners to sell out. With limits to capacity (e.g., limited arable land in California), one of the most economical ways to expand is to purchase production capacity through acquisitions, instead of building it.

Large wine companies seem to know that the breaking point is arriving when consumers will be unsatisfied with blended wines. They are already planning for the next wave of consumer trends by buying foreign brands, acquiring domestic wineries and brands, or buying arable property that can support a future premium brand. Target assets in the wine industry are well defined, and fully 50% of its participants think that a merger or sale in the next five years is likely or possible (see figures below, in pdf version).

Possible alternative approaches to measuring the impacts of mergers in the wine industry on value include a careful analysis of a select few acquisitions to understand more fully the motivation, sources of cost-savings and revenue gains, and challenges involved in integrating new ownership. A promising example is the vast array of winery acquisitions and sales undertaken by Agustin Huneeus for 50 years across 15 countries. As Mr. Huneeus observes 'I was struck by the extent to which a wine's quality – something hard to articulate, but easy to recognize on the palate – was usually an expression of the passion of whoever was responsible for making it. If the company's original owner was still in charge, that passion was palpable...But if the owner left, the passion went with him and the result was predictable...However well-intentioned corporate management might be, essentially its concerns are next quarter's results. Corporate executives are not paid to take risks, and the last thing a corporation wants in its executives is passion. I learned all this and a great deal more.'

Huneeus suggests that the real drivers of value are the intangibles: the fact that vineyards are family-owned, and

that their wine is infused with both the passion of the family and the refined palate of the winemaker. Finding ways to objectively measure the impact of these and other intangible sources of value in acquisitions requires a more creative approach than examining unexpected stock returns or shifts in reported profits or sales.

The real options pricing (ROV) technique may be one such approach. It applies financial options pricing to real capital budgeting decisions, including intangible ones: the right to delay, alter inputs, expand or contract the scale of production, or abandon production altogether. A call option on an underlying stock gives its owner the right to buy the stock later at a certain exercise price; if the stock price is above the exercise price at maturity, the call owner profits; if the stock price is below the exercise price, the owner lets the option expire and avoids the loss they would have incurred had they owned the stock. Most studies show that the typical measures of value creation in mergers and acquisitions -- excess stock returns and abnormal accounting profits -- understate value creation by between 30 and 300%.

To apply real options pricing to valuing wine sector mergers and control-oriented acquisitions, we need to first characterize the nature of the option, and then need data on the five drivers of real option value: value and standard deviation of underlying asset, the exercise price, time horizon, and risk-free interest rate. Of these, variability of the asset return is the most difficult to find, primarily because the underlying asset is often a unique real inactively traded asset, like a small vineyard in a valley near the ocean in Chile. We propose that a reasonable proxy for the return distribution of vineyards is movements in the returns of the various Wine Industry Indices that are traded on exchanges around the world. The other four drivers of option value would be easily attained and specific to the asset underlying the real option.

The real challenge in applying ROV is in correctly characterizing the nature of the option itself. For example, leasing a vineyard with the right to buy it later is the real option to delay the purchase until after we have gained information about the vineyard's value. The owner of the lease with option to buy could wait to see if there was a flood, wildfire, vine infection, lack of irrigation, or drop in world demand for that particular varietal. For the purchase price of the real call option alone, one could avoid the losses on the vineyard had they bought it outright. Real options - managerial flexibility - have real value.

Focusing on the Chilean wine industry, with whom we have personal contacts, offers a rich array of wine sector events which lend themselves well to an ROV analysis. One such example is the Garces Silva Family Vineyards in Leyda, San Antonio Valley, Chile. Despite the expense, this small vineyard purchased an automated grape-harvesting machine to supplement a strained labor force during peak harvests periods, an example of the option to switch the input mix. Massive wildfires in early 2017 heated the grapes and sped up the harvest across the region, creating a mass labor shortage at harvest time. The grape-harvesting machine made the difference between survival and failure of the vineyard that year. ROV values the vineyard's decision to invest in this flexibility - a type of "insurance policy," according to Diego Rivera wine master. Many other examples abound, including the option to switch outputs: the decision to abandon winemaking and sell grapes outright to other markets or wine producers, or; the decision to tear out the vines and plant a different crop altogether.

We can supplement the analysis by examining changes in the excess stock returns and accounting performance data of the handful of larger publicly traded wine stocks, or with the private Chilean wine firms and industry officials we have gotten to know personally, both before and after significant regulatory and tax reforms were enacted. Chile, for example, credits its adoption of Free Trade Agreements and its reduction in tariffs with key trading partners with increasing growth and profits in its wine industry.

In sum, the wine industry is growing and vibrant, and experts expect many changes in ownership and further consolidation in distribution in the years to come. Standard methods of measuring the impact of mergers and acquisitions on the wine industry fall short because they rely on publicly available stock and financial statement data, and because the wine industry involves very unique assets with very risky profiles. Equally unique and creative measures, using a variety of approaches to try to triangulate and validate measures of value impact, are needed to appropriately examine the impact of mergers on value in the wine industry.

Relevant research by authors:

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