Bordeaux 2016 Abstract Submission

Title
The Wine Buyer’s Dilemma: Does it Pay Off to Pay More?

I want to submit an abstract for:
Conference Presentation

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Keywords
Price; Quality; Expert Opinion

Research Question
To what extent does it pay off in terms of quality to pay more for wine?

Methods
Regression analysis; correlation analysis

Results
Consensus score results in a stronger relationship between price and quality. Marginal impact of paying an additional dollar and odds of receiving a higher quality wine decline with price.

Abstract
One of the seminal topics in wine economics focuses on the relationship between wine quality and price. Numerous studies have used the hedonic method to explore this topic by modeling price as a function of the attributes of wine including the sensory characteristics of the wine or expert opinion as measure of wine quality. This work has generally found a positive relationship between wine quality and price, although the results vary widely in terms of the strength of the observed relationship. The lack of stronger and more consistent results is not surprising given that wine is an experience good and that objective measures of wine quality do not exist. Hedonic studies have generally measured wine quality based on the opinion of a single expert publication, yet a large body of research suggests that expert judgments lack sufficient consistency and reliability. Thus reliance on an individual expert’s subjective and imprecise assessment of wine quality introduces noise into the relationship between price and quality, which may dampen the strength of the observed relationship. Moreover, wine buyers may not be fully informed regarding the information on quality that does exist, which may result in an inefficient market where prices depart from the full information level.

The relationship between wine quality and price is important to information-constrained consumers who are frequently confronted with the dilemma of whether or not to choose a more expensive bottle with the hope of obtaining a higher quality wine. The present paper seeks to add to our understanding of the relationship between wine quality and price from the perspective of the consumer, and asks the question: To what extent
does it pay off for the uniformed consumer to pay more for a bottle of wine? There are several departures from prior work. First, in order to reduce the noise inherent in individual expert judgments and estimate a purer relationship between quality and price, wine quality is measured as the average of three expert scores for each wine. The choice of using a “consensus” evaluation of wine quality is motivated by Ashton (2011) who finds that the accuracy of experts’ judgments can be improved by combining the scores of individual experts, and that the majority of improvement can be attained with the use of just two or three experts’ ratings to form the composite judgment. In addition, following the consumer perspective, wine quality is modeled as a function of price rather than the traditional hedonic formulation where price is modeled as a function of quality.

The empirical analysis explores the relationship between quality and price using a dataset consisting of more than 1000 red wines produced in Washington State that were each reviewed by three prominent wine publications. The analysis is organized into three parts. The first phase of the analysis calculates correlation coefficients between price and score for each of the three expert opinion sources individually, as well as that between price and the average score from the three publications. The results confirm that a stronger relationship exists between price and consensus score than between price and the individual scores. The magnitude of the correlation between price and consensus score also exceeds many of the prior findings in the literature. In the second phase of the analysis, a regression model is estimated to explore the relationship between price and quality using consensus score as the dependent variable. The explanatory variables include a cubic formulation of price, which allows the relationship between price and quality to vary across the price spectrum. The regression demonstrates that price is a strong determinant of quality for Washington reds, and the coefficients for the price variables indicate that the marginal increase in score attributable to a one dollar increase in price is stronger at the lower end of the price distribution than at the higher. These findings suggest that it is reasonable for consumers to expect to receive a higher quality wine when paying a higher price – and that the greatest expected bang for the additional buck can be found when moving from the low to middle shelf in the wine store.

While the regression results indicate that consumers can expect to obtain a higher quality wine when paying a higher price for Washington reds, they do not provide an entirely satisfying answer to the consumer’s dilemma. Given that the relationship between quality and price is imperfect, a dispersion of scores exists at any given price point – thus there is no guarantee that paying more will always pay off. Consumers may also be interested in understanding the odds that spending more will result in the purchase of a higher quality bottle. Using the regression coefficients and variance in scores across price ranges, the final phase of the analysis attempts to estimate the probability that paying more will pay off. Initial results indicate that the odds of obtaining a bottle of significantly higher quality when moving to a price range that is $10 higher are greatest at the low-end of the price spectrum. Moreover, the odds of receiving a higher quality bottle decline more rapidly than the expected improvement in quality when moving up the price spectrum because the variance in scores generally increases with price as well.