## Bordeaux 2016 Abstract Submission

### Title

Medals and Wine Prices

### I want to submit an abstract for:

Conference Presentation

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### Keywords

Medals; Wine; Price

### Research Question

We look at the impact of medals obtained at well-known wine competitions on prices.

### Methods

OLS and IV estimation.

### Results

Naive OLS estimation shows that medals have strong effects on prices, but IV estimation shows that these effects are less strong but still significant.

### Abstract

To what extent are wine prices influenced by medals awarded at wine competitions? Does the impact on prices vary by the type of award (bronze, silver, or gold medal)? Do the characteristics and rules of wine competitions (professional or non-professional tasters, format of the wine tasting, management of the samples, number of awarded medals, prestige and notoriety of a contest) matter in explaining the variation of prices? To answer these questions we use a novel data set on wine transactions and the exhaustive records of the awards granted to Bordeaux wines by the most important wine contests held in France and Belgium between 2006 and 2015. The transaction data are obtained from a large Bordeaux-based broker. This broker acts as a middleman facilitating the transaction process between
on the one hand the wine producers and on the other the retailers (who then sell the wines to individual consumers). Each transaction records the quantity sold, the total price paid, the date of the transaction, and some characteristics of the wine (appellation, vintage, date of sale, name of wine, identity of producer, identity of buyer). The data from the wine contests were collected by ourselves. For about ten of them (one is held in Belgium, all others in France) we gathered for each year the date of the competition, the identities of the prize winners and the precise medals they received). Also recorded for each contest are the total number of wines competing for the medals, the type of jury, and the rules of wine tasting. An important and unusual aspect of our data set is that it records the precise dates of all transactions and the exact dates at which the medals were awarded. For any given transaction we can thus tell how many medals were attributed (colour of medal, name of contest) to the wine before the wine price was determined. We also know whether the wine that is being sold will eventually win medals at some point in the future (this is information known to the econometrician but not to the agents).

The first part of the paper provides a descriptive analysis of the data. On average a wine is sold at around 2 euros/75cl. Wines that have been awarded prior to the transaction date sell at about 25% more. Interestingly, the premium for a future medal is slightly less, around 20%. Statistics on the transaction dates show that awarded wines are relatively more frequently sold after the contests (usually in March or April of each year), while non-prize winners are more often sold before the competitions. This reveals a wait-and-see strategy among contest participants, i.e., they wait for the outcome of the competitions (in the hope to obtain a medal) before selling their products. The data from the contests reveal that the number of awarded medals has increased by about 40% during the observation period. The number of competitors has remained fairly constant over time, implying that the average probability of receiving medals has increased between 2006 and 2015 (i.e., the competition for awards has become less fierce).

In the second part we estimate simple models to evaluate the impact of medals. We consider price/medal equations of the form

\[ P_{ivt} = \beta_0 + \beta_1 M_{ivt} + \beta_2 X_{ivt} + \mu_i + \mu_v + \mu_t + \epsilon_{ivt} \]

where \( P_{ivt} \) is the price of wine \( i \), vintage \( v \), sold at time \( t \), \( M_{ivt} \) a vector of dummies indicating whether the wine has obtained a medal of a given color in a given contest prior to \( t \), \( X_{ivt} \) a vector of control variables (appellation, type of packaging, type of wine producer, etc.), \( \mu_i \), \( \mu_v \), and \( \mu_t \) are respectively wine, vintage, and time effects, and \( \epsilon_{ivt} \) is an idiosyncratic shock. Estimation of this equation by OLS confirms that wines with medal(s) are sold at higher prices (the parameters are generally statistically significant). The coefficients associated with the different types of medals are generally ranked as expected (gold fetches the highest prizes, than silver, and finally bronze). The effects differ according to the notoriety of the competition (the impact of a medal awarded at the oldest competition, the Concours de Paris, founded in 1870, is stronger than the impact of a medal attributed at the Feminalise, a competition which was first organized in 2007). The OLS estimates may produce biased estimates if the error terms \( \epsilon_{ivt} \) are correlated with the medal indicators included in \( M_{ivt} \). Although we include various fixed effects in the specification (the \( \mu \)'s), the error term \( \epsilon_{ivt} \) may reflect the effect of unobserved quality of the wine, and consequently there is potentially a correlation between this error and the medal vector \( M \).
We then expect that the OLS estimates of medals are biased upwards. In the last part of the paper we will try to address this omitted variable bias. A natural idea would be to use wines for which multiple transactions (before and after the medal attributions) are observed. Unfortunately there are too few such observations in the sample to fruitfully exploit this idea (most wines are actually sold in one shot). Another possible identification strategy is to exploit the new regulation introduced in 2013 obliging all contests to award not more than 30% of the participants in each given year. Finally we plan to adopt an Instrumental Variable (IV) approach to obtain causal impacts of the medals. A potentially good instrument for the variable indicating whether a medal was obtained by i in a given contest is a measure of the degree of competition that this wine faced. We will define this degree of competition by calculating the number (fraction) of medals obtained by i’s competitors in contests held in previous years.