This paper addresses the need for a reliable and unequivocal index for the market for fine wine. The existence of such a reference wine index is crucial for the future development of the fine wine market as an alternative asset class of its own. A good index will facilitate (i) the estimation of the value of wine investments and of benchmarks; (ii) the estimation of coherent prices for infrequently traded wines; (iii) the use of risk management practices and (iv) a possible future development of wine derivatives, - which might be attractive for amateurs, merchants (including the “négocié”) and, of course, wine producers.

Since the early 2000’s, several wine indices have been proposed and calculated by practitioners (e.g. Liv-Ex in UK, Idealwine in France) but these all suffer from severe weaknesses. The absence of any solid theoretical foundations constitutes the major problem. These indices are purely ad-hoc and usually build in a hybrid way which borrows elements from classic stock market index theory and adds some subjective and sometimes opaque aspects (e.g. the weighting scheme in the Liv-ex indices). A further drawback of these approaches is the lack of consideration of the specificities inherent to the wine market and in particular its heterogeneous nature and low liquidity. The use of simple weighted averages in this context may lead to spurious autocorrelation and heavily biased volatility estimates. As such, and contrary to real estate indices, none of the so far proposed wine indices can be seen as adequate in reflecting the wine market or part of it.

The aim of this paper is, therefore, to close this gap and to propose a unified index for fine wine. In line with this aim we compare different approaches to construct wine indices and determine on the basis of a variety of tests which one is the most appropriate for this specific market. We consider the following approaches: (i) weighted average and median of the prices or the returns; (ii) repeat-sales regressions using both OLS and GLS to account for heteroskedasticity; (iii) hedonic regressions and (iv) a hybrid model including both the features of RSR and hedonic regressions. We compare these models on the basis of both theoretical and pragmatic arguments. For instance, a typical issue that affects all of the aforementioned techniques apart from the weighted average and median is the possibility of an ex-post revision of the index. This does not invalidate these approaches but a desirable feature of any model is to ensure that such revisions will not be too large or systematic (either upward or downward).

We consider three sets of tests to compare the quality of the different models: (i) in-sample goodness of fit (AIC); (ii) out-of-sample goodness of fit based on the predictive power of each model (root mean square error); (iii) the ability of each model to fit artificial data obtained from nonparametric simulations. This last framework has the advantage of being very flexible and allows for a vast variety of possible situations. Our empirical study is based on hand-collected auction hammer prices from The Chicago Wine Company (TCWC) over the period 1996-2011. This enables us to cover a long period of time for one of the major auction houses across the world. Although the analysis is still incomplete we already find some indications at this preliminary stage. The results suggest that the weighted average approach performs quite well when the sample is sufficiently large. It further has the advantage of being tractable, easy to communicate, and remains completely unaffected by the issue of ex-post revisions. When considering smaller samples, the RSR and the hybrid approaches take the lead over a simple weighted average. In terms of price interpretation, the hedonic approach is most appealing as it gives a value to a variety of attributes that are linked to fine wine. However, its assumption that the value attached to each of these attributes remains constant over time constitutes a major drawback. This assumption becomes more and more unrealistic for certain parts of the wine market, with an increased importance of brands like “Lafite” or “Latour” that has led the prices of those wines to increase dramatically during the last few years..

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