

# **Wine Quality and Varietal, Regional and Winery Reputations: Hedonic Prices for Australia and New Zealand**

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## ABSTRACT

### **Wine Quality and Varietal, Regional and Winery Reputations: Hedonic Prices for Australia and New Zealand**

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We estimate hedonic price functions for premium wine from Australia and New Zealand, differentiating implicit prices for sensory quality ratings, wine varieties, and regional as well as winery brand reputations over the vintages 1992 to 2000. For Australia, the results suggest regional reputations in general are becoming increasingly significant through time, indicating an intensifying regional quality differentiation. As well, some specific cool-climate regions (e.g. Adelaide Hills, Mornington Peninsula and Tasmania) are becoming increasingly preferred over other regions. Price premiums based on brand reputation also are shown to be significant. For New Zealand, regional quality differentiation is considerably less significant than is the case in Australia, which raises the question as to why. (Is there scope for more regional promotion there?) In each country, price premia associated with both James Halliday's and *Winestate* magazine's sensory quality ratings, and with Halliday's winery ratings and classis wine designations, are highly significant.

**Key words:** Wine quality, regional reputation, brand reputation, hedonic pricing

**JEL codes:** C50, D12, Q13

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## **1. Introduction**

For more than a dozen years now the wine industry has been booming in Australia and New Zealand. Both the area planted to vineyards and the volume of wine produced have grown at about 7 per cent per year on average since the late 1980s, while the two countries' exports of wine have been growing at more than 20 per cent per year (from a low base). Simultaneously, wine exports from California, South Africa and the Southern Cone of Latin America have been soaring too, such that the share of global wine production that is exported has risen by more than 50 per cent (Anderson and Berger 1999). Yet the volume of wine consumption per capita in Australia, New Zealand and globally, has been static. Indeed consumption has been falling steadily in the traditional wine-consuming countries of Europe and the southern cone of South America, offsetting demand growth in the UK, the US, and (from a tiny base) East Asia. In each of these markets, however, as in Australia and New Zealand, there has been a dramatic substitution of quality for quantity: premium (bottled) wine sales are growing steadily while non-premium (cask) sales are in decline (Anderson 2001).

With global demand static and export supplies from the New World booming, the average price of internationally traded wine is bound to come under pressure to decline in the coming years. In this more-competitive and more-globalized environment, the extent to which the price declines (or rises) for a particular group of producers will depend very much on the quality upgrading of its product, absolutely and relative to that of other producer groups, as perceived by consumers at home and abroad. This raises the question of what determines the consumer's perception of quality when they buy wine.<sup>1</sup> In particular, what are the market

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<sup>1</sup> This is to be distinguished from the quality upgrading over time of super-premium wine as it matures in the bottle in the years following its initial sale by the winery, as captured by time series of prices in the secondary market. According to Ashenfelter (2000), Ashenfelter, Ashmore and Lalonde (1995) and Byron and Ashenfelter (1995), key determinants of the vintage-to-vintage variation in the ultimate quality of mature wine are a few

values of such things as the reputation of the producing region as distinct from corporate brand reputation, or grape variety reputation or the published ratings of wine writers/judges/critics; and how have they evolved over time?

This paper addresses this question as it relates to Australian and New Zealand wines, using a hedonic pricing model. It begins by briefly reviewing the literature on such pricing models and their application to wine. It then presents the model and the two data sets used here and details the empirical results for prices in the Australian and New Zealand markets separately. The final section summarizes what has been learnt and suggests areas for further research.

## 2. Literature review

A number of studies apply hedonic price analysis to estimate implicit prices for wine *quality* attributes.<sup>2</sup> They are based on the hypothesis that any product represents a bundle of characteristics that define quality. Their theoretical foundation is provided in the seminal paper by Rosen (1974), which posits that goods are valued for their utility-generating attributes. Rosen suggests there are competitive implicit markets that define implicit prices for embodied product attributes, and that consumers evaluate product attributes (e.g. features of a car, indicators of air or water quality) when making a purchasing decision. The observed market price is the sum of implicit prices paid for each quality attribute. Rosen also recognizes an identification problem for supply and demand functions derived from hedonic price functions, because implicit prices are equilibrium prices jointly determined by supply and demand conditions. Hence, implicit prices may reflect not only consumer preferences but also factors that determine production. In order to solve the identification problem it is necessary to separate supply and demand conditions. Arguea and Hsiao (1993) argue that the identification problem is essentially a data issue that can be avoided by pooling cross-section and time-series data specific to a particular side of the market.

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straightforward weather variables in the growing season -- information that consumers appear to have been ignoring.

<sup>2</sup> This work builds on a long stream of agricultural econometric research on product quality. See, for example, Waugh (1928).