Determinants of Demand for Wine
-Price Sensitivity and Perceived Quality in a Monopoly Setting
Tobias DAHLSTRÖM1, Erik ÅSBERG2, 1
1 Göteborg University ; 2 Jönköping International Business School
Tobias.Dahlstrom@economics.gu.se, Erik.Asberg@ihh.hj.se

In this paper we investigate whether or not consumers can identify quality in wine, more specifically, if they choose a higher quality wine when all else, including price, is equal. Using sales figures from the Swedish alcohol monopoly stores, Systembolaget (SB), and reviews from professional wine critics we construct a unique data set to estimate this and other effects. We differ from many recent studies on the demand for wine in that we treat wine as a heterogeneous good. For the individual consumer we assume that both observed and unobserved heterogeneity is present. Observed heterogeneity includes objective features of the wine such as variety, country of origin and price. Arguably, the most important unobserved characteristic of a wine is its quality. One might argue that quality is not always unobserved and this is an issue that we will return to later.

Understanding how consumers perceive and assess quality in wine is a new, but rather vivacious research topic. Many of the tools necessary for such an analysis come from the so called new consumer theory, credited first and foremost to Lancaster (1966) who showed how one might divide demand for a good into demand for specific characteristics of the same good. More recently Gergaud & Livat (2007) investigate a sample of 6,000 European wine consumers to see how they use various signals to assess quality. They divide the sample into connoisseurs and non-connoisseurs and ask them questions on previous and present experience with wines from Bordeaux. Their main conclusion is that connoisseurs use price as a signal of quality to a less degree than non-connoisseurs. Combris et al. (1997) generally criticize the method of using data acquired from wine guides which they deem unreliable. They perform a hedonic price study on a sample of 519 Bordeaux wines that were tested in a unique French experiment by a jury of twelve professional oenologists and sommeliers. Besides sensory attributes each wine is assigned a grade between 0 and 20 to reflect overall quality. In line with Rosen (1974) they however opt not to include this grade as an explanatory variable, claiming that overall quality is not an intrinsic character of the wine. Further they argue that since the wine was bought prior to the grading of it, the quality grade can logically have no influence on its price. Their main findings are that market prices of Bordeaux are almost wholly explained by the objective features displayed on the label of the bottle. When they however let quality as measured by the jury grade be the dependent variable they find that this is first and foremost explained by the sensory characteristics of the wine. One offered explanation is that the preferences of the average consumer may very well differ from that of a professional jury.

1 The authors would like to thank Systembolaget AB and Jens Dolk for generously supplying data and information. Erik Åberg gratefully acknowledges financial support from Sparbankernas Forskningsstiftelse.
2 As Morishima (1959) correctly points out a similar analysis of demand was performed already in the 1930s by Hicks and others.
Some of the results presented in this paper are specific for wine and may not even be possible to generalise outside of Sweden. However, other results demonstrate general consumer behaviour, behaviour that normally may be difficult to pick up with real world data. This study hence adds to research mainly done using experimental data or questionnaires, by testing their results using actual consumer purchases. The main advantage lies in the data set used. It covers around 90% of value and volume of the Swedish market of wines. This differentiates it from other studies done on wine which have used only small subsets of the market. Further, we have information of 9 characteristics of each single wine included in the study, some directly observable to the consumer such as packaging and country of origin and others which are not observable such as quality. The quality measured used is published at the end of the time period and is hence not known to the consumer at the time purchase. This grade is given to the wine by five knowledgeable wine critics during an open testing covering all 924 wines used in our study. In addition we are able to control for exposure in the media and possibility of previous knowledge of the wine and the possibility of cross border shopping. During the estimations we employ a non-linear demand function which allows for non constant price elasticity. A further advantage of our data is that since Sweden has virtually no production of wine, there does not exist any home bias. We are able to confirm that consumers buy more of wine which is of higher quality. To be specific consumers are able to differentiate between wines and their tastes are at least somewhat in line with those of professional wine critics which we choose to interpret as if consumers are able to recognise quality. Consumers seems to have a negative perception of ecological wines resulting in lower consumption of ecological wines, thus it would be rational for a producer to not label the wine as ecological. The packaging of the wine has an important impact on consumption as does the country of origin. This suggests that people may have a tendency to discriminate between goods based on easily remembered and observable characteristics even if other characteristics are observable.

**JEL Code:** D12; D42  
**Key words:** consumer preferences; wine; quality; price elasticity; heterogeneous goods