

**Consumer Response and Willingness to Pay for Sensory Properties in  
Washington State Red Wines**

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The inherent intrinsic factors of red wine have become increasingly important in consumers' purchasing decision. Quality of a red wine depends on its intrinsic cues which refer to inherent sensory qualities of the product, such as astringency, bitterness, aroma, flavor, and appearance. Consumer will consider these properties of a wine when make repeat purchase.

The objective of this paper is to identify the sensory properties of Washington State red wines that influence consumers' willingness to pay (WTP). Two models are estimated via maximum likelihood: a consumer model that includes subjective consumer sensory evaluations and consumer socio-demographic characteristics and a model that utilizes trained panelists' analysis of sensory properties. These estimations can help us to understand what properties of Washington State red wine determine consumers' purchase decisions, as well as to help increase competitiveness of the industry. Results of the estimation can be used by wine grape growers and winemakers in the production of wines with attributes shown to influence buying behavior. The consumer model in this paper serves as a benchmark. Trained panel model is estimated to evaluate its effectiveness relative to the consumer model.

From the estimation results, we find that flavor is a significant sensory factor affecting WTP in both models, while astringency positively influences WTP in consumer model and bitterness negatively affects WTP in trained panel model.