ITALIAN RED PREMIUM WINE DEMAND: AN ALMOST IDEAL DEMAND SYSTEM USING SCANNER DATA

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Abstract

Change in lifestyles, reduction in the total consumption and stronger preferences towards high quality wines imply a modification of price and expenditure elasticities patterns.

Did the Italian wine demand switch from inelastic to elastic? Which of the wine categories has still a loyal market? Do the Italian appellations for wine generate different consumer's behaviors?

This study contributes to the existent literature with analyzing demand of Italian premium wine in Italy for the first time. Moreover, the measure of own price elasticities and substitution effect among appellations, assessing the effectiveness of appellation as strategic tool for products differentiation, gives useful information for retailers, producers and policy makers.

Italian red premium wine demand is analyzed using an Almost Ideal Demand System (AIDS). Estimation was carried out using the Generalized Method of Moments (GMM) estimator, which avoids assumptions about the error structure and accounts for endogeneity.

AIDS, first proposed by Deaton and Muellbauer, allows the estimation of a demand system that satisfies theoretical properties like adding-up, symmetry, homogeneity and not constant elasticities. Because of its properties, AIDS became suddenly a commonly used tool in wine and other goods demand studies (Torrisi et al., 2006; Carew et al., 2004; Seal et al., 2003; Chang and Bettington, 2001).

The empirical analysis is based on Italian homescan panel data. This is the collection of purchase records of 6,000 Italian households at retail level. Data includes product specific information either household socio-demographic characteristics. ACNielsen Homescan panel is demographically balanced and it aims to represent the entire population of households.

The panel is stratified on demographic and geographic criteria. Moreover, it is balanced on region, age of the head of the household, age of the shopping responsible, number of family components, income level, and number of children. The selection is done in order to match exactly the Italian status of these characteristics. The weighting of the number of households in the panel reflects the national demographic and geographic distribution. Because of the sampling design and properties, AcNielsen homescan panel data can be considered to be representative of the entire national population.

Results show different behavior across appellations. Market for DOC and IGT wines shows a high degree of loyalty. A higher elasticity is shown for Table and DOCG wines, being more sensitive to the modification in consumers' preferences. DOC and IGT substitute for each other. Seasonality in Italian wine demand is related to Christmas holidays and summer time. Wine demand is highly influenced by promotional activities. Finally, the paycheck at the end of the month is a good occasion to open a bottle of wine.

Looking at future research directions, it would be useful to estimate demand with more flexible demand systems in a more disaggregate context. The econometric complexity of treating absence of price information and/or zero expenditure make of these objectives a challenging experiment.

This research demonstrates that demand system analysis gives useful information about market, offering a relevant investigation tool for marketing in the agro-food business and for policy analysis. More specifically, the study assess that, indeed, appellations differentiate red wines within the premium segment. Methodologically, this study suggests the implementation of iterative GMM estimator, which corrects for endogeneity of the expenditure, for hetheroscedasticity and serial correlation, without any assumption about error structure. This

estimator, because of its properties, allows the demand system estimates to be more efficient and consistent with theory than 3SLS and FIML estimators.
The structure highlighted in the results show the presence of a competitive system, which needs to be examined with higher accuracy. The analyses of a more disaggregate reality, in addition, is auspicable.