

How green is your Grüner?

Young adult wine consumers' preferences and willingness-to-pay for eco-labelled wine

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Abstract - Young adults are a promising consumer segment for the wine industry. However, little is known about their preferences for wine attributes in general and their willingness-to-pay for eco-labelled wine in particular. We fill in this void by assessing the impact various wine attributes have on the wine choice behaviour of young adults in Austria and elicit their willingness-to-pay for organic, sustainable, and carbon neutral claims for a bottle of the most common grape variety in Austria, Grüner Veltliner. We conducted a discrete choice experiment with visual shelf simulations and controlled for individual characteristics in our statistical analysis. Parameter estimates of a multinomial logit model revealed the impact of wine attribute levels on purchase probability, which were used to calculate willingness-to-pay estimates for each claim and to simulate potential market shares for eco-labelled wine in a competitive retail setting. Findings reveal that young adults prefer wines with environmental claims over conventionally produced ones. While the established organic claim resulted in higher price premiums and market shares compared to newly introduced claims for sustainable and carbon neutral viticulture, market share simulations point to the likelihood that schemes compete for market share.

INTRODUCTION

Young adults are a promising consumer segment for the wine industry. While their enthusiasm for the wine category has driven overall wine consumption in the U.S. (Winebusiness.com, 2011), their low interest in wine in historic wine producing countries has been linked to a decline in overall wine consumption in those countries (Mtimet and Albisu, 2006; Thach and d' Hauteville, 2008). Thus, young adults' preferences are not just important drivers of future wine consumption, but already influence current wine sales.

Young adults have come-of-age with an ever increasing range of "green" products leading Thach and Olsen (2006) to the conclusion that social and environmental awareness is a major trait of this new consumer generation. Even though empirical research on young adults' preferences for eco-labelled wine is sparse, studies suggests that they value environmental claims for wine positive (Vecchio, 2013).

Thus, we hypothesise, that environmental claims could be a viable market strategy for the Austrian wine industry to better target this new consumer segment. Our objectives are to assess the impact environmental claims have on the wine choice behaviour of young adults in Austria; to elicit their willingness-to-pay for organic, sustainable, and carbon neutral labelled wine; and to simulate potential market shares.

METHODOLOGY AND DATA

A discrete choice experiment (DCE) with visual shelf simulations was used to elicit preferences for wine attributes among young adult wine consumers in Austria. Attributes considered were region of origin, bottle style, presence of an award or discount, residual sugar, eco-label, and prize. We randomly approached 180 individuals at four major universities in Vienna and asked them to trade-off the above mentioned attributes for the most common grape variety in Austria, Grüner Veltliner.

A questionnaire accompanied the quantitative study to control for individual characteristics such as gender, past purchase behaviour with regard to organic wine, and perceived ability to explain "green" viticultural practices.

We estimated a multinomial logit (MNL) model on wine attributes and extended it by interaction effects which allowed us to disentangle the effects of individual wine attributes and individual characteristics on choice probability.

Parameter estimates represent part-worth utility estimates for each attribute level which can be used to calculate marginal willingness-to-pay measures. Further, we used these part-worth utility estimates in a decision support system to estimate potential market shares for eco-labelled wines for the wine choice behaviour of our sample population.

The final model correctly predicted 40% of observed respondents' wine choices representing a significant improvement to selection by chance (i.e. 20%).

RESULTS

The sample includes respondents from 18 to 35 years of age and is skewed towards wine consumers below the age of 25 with both sexes being equally represented. Four out of ten individuals had bought organic wine before.

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Table 1. MNL model estimates for environmental claims.

	coef	z	Pr(< z)	
organic	0.415	2.304	2.122E-02	*
sustainable	0.385	2.553	1.068E-02	*
carbon neutral	0.383	2.498	1.249E-02	*
price	-0.268	-8.503	<2E-16	***
organic:BUY_ORGANIC	0.365	1.713	8.665E-02	.
price:BUY_ORGANIC	0.073	2.808	4.982E-03	**

Significance codes: '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1

^aBuy_Organic ... subject had bought organic wine before

The MNL model results are presented in Table 1. Due to space limitations the part-worth utility estimates from the MNL model will only be shown here for the eco-label and price attribute; estimates for the other five attributes in the DCE can be obtained from the author.

As expected, the price coefficient is negative. Thus, on average higher prices reduced the probability of a wine being chosen.

All eco-labels showed significant and positive part-worth utility estimates, indicating that environmental claims significantly increased the probability of a wine being chosen. Organic wine received the highest valuations followed by sustainable and carbon neutral claims. Interestingly, individuals who had bought organic wine before were on average not only more likely to buy organic wine, but were also willing to spend more on a bottle of wine in general.

Marginal willingness-to-pay estimates reveal that young adults were willing to pay price premiums for environmental claims. On average, they were willing to spend € 1.55 more on organic wine compared to a conventionally produced one, holding all else constant. Little difference was found between price premiums for sustainable and carbon neutral wines, which received premiums of € 1.44 and € 1.43 respectively.

Next, we simulated potential market shares in a competitive retail situation to assess the impact of newly introduced environmental claims on initial market shares. Wines were initially specified with varying levels of the above mentioned wine attributes with the baseline scenario consisting of three conventional wines and one organic wine. First, the cheapest conventional wine on offer received a sustainability claim. It thereby increased its market share by drawing from the organic label, as young adult's price sensitivity outweighed their preferences for the organic claim. When adding a sustainability claim to the most expensive conventional wine on offer, it too gained market share but drew less from the organic claim. This could be due to the fact that the organic brand still remained the cheapest "green" wine on offer. However, some consumers gained additional utility from higher prices and decided to switch. Overall, both scenarios reduced the share of non purchases and increased the total market share of environmentally friendly produced wine.

CONCLUSIONS AND MANAGERIAL IMPLICATIONS

The aim of this study was to shed light on the preferences for environmental claims of young adult wine consumers in Austria. The significant negative price coefficient highlights their good-value for money approach when shopping wine and is well in line with other studies reporting on the price-sensitivity

of young adults (see among others Thach and Olsen, 2006). Nevertheless, young adults valued environmental claims for wine positive and were willing-to-pay price premiums. Our results are comparable to a previous study on young Italians where similar but to some degree lower valuations for eco-labels were detected (Vecchio, 2013). Due to the hypothetical nature of the DCE, our results should therefore be interpreted as an upper boundary on potential price premiums.

We could also replicate the suggestion by Mueller-Loose and Remaud (2013) that the organic claim is more highly valued than other social or environmental claims. However, their reported negative valuation for carbon neutral claims was not present in our sample of young adults. Indeed, the fact that all considered eco-labels in this study were highly valued with little difference leads us to the hypothesis that the label itself is less important than the fact that there is an eco-label at all.

Moreover, our market simulation confirmed the proposition of Mueller-Loose and Remaud (2013) that environmental claims for food compete for market shares. For our sample this was especially true if wines offered at lower price points than the organic wine shifted to environmentally friendly viticulture.

In conclusion, results suggest that eco-labels are a viable market strategy for targeting young adults and thus may offer an opportunity to react to increased competitiveness within the wine industry. Eco-labelled wines not only offer the possibility of carrying price-premiums, but could also be tools for meeting growing environmental and social consumer awareness. Especially as young adults are confronted with such claims throughout the food industry they are more likely than not looking for similar claims for their wine too.

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