

## Do you like organic wine? Preferences of organic consumers

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### Abstract

*The market share of organic wine is remarkably lower than the market share of organic food in general. The objective of this paper was to analyse the wine preferences of consumers of organic food in Germany in order to identify how demand for organic wine could be increased. Choice experiments and structured interviews were conducted with 600 consumers of organic food. In the choice experiments, the participants clearly preferred organic wine over conventional wine. However, preferences for organic wine were lower among people with a high interest in wine, i.e. people who place high importance upon vintage, grape variety and winery. We conclude that targeted marketing activities are needed to convince these people about the quality of organic wine. Interestingly, medium-priced wine (4.99 € and 6.99 €) was preferred over low-priced wine (2.99 €). It is therefore recommended to avoid a low-price strategy for organic wine.*

### Introduction

In Germany, the market share of organic wine is clearly lower than the market share for organic food and drink in general. While organic food had a market share of about 4% in 2008, the share of organic wine in the total wine market was only 0.6%. It thus seems that among organic consumers, the share of conventional wine consumption is higher than the share of conventional food consumption in other food categories. Studies from Switzerland suggest that reasons for this fact might be a limited availability of organic wine, strong preferences for specific varieties and qualities, origins and wineries or a bad image of organic wine, particularly with respect to taste (Mann et al. 2012; Stolz and Schmid 2008).

Compared to other food and beverages, wine is characterised by a wide range of products not only in specialised shops but also in supermarkets. This is not only the result of the big number of producers but also of widely diverging consumer preferences (Goldstein et al. 2008; Barreiro-Hurlé et al. 2008). Wine is a luxury good, and taste is of superior relevance (Lockshin et al. 2006). Taste in turn depends on many different factors, such as brand, country of origin, grape variety, vintage and terroir. All these indicators may serve as keys for the assessment of wine quality at the place of purchase. Nevertheless, the large number of factors impacting on wine quality makes reliable judgements for most consumers extremely difficult (Lockshin et al. 2006). It seems that many consumers thus use 'price' as a quality indicator and higher priced wine is perceived to be of higher quality than cheaper wine (Lockshin et al. 2006; Goldstein et al., 2008). This behaviour has particularly been observed among consumers who have limited knowledge about wine (Gergaud and Livat, 2007). Price as a quality indicator seems to be of higher relevance, when less other quality cues are available, price differences and quality differences are higher and consumers' knowledge on prices is better (Zeithaml, 1988).

Given the low market share of organic wine, this contribution aimed to reveal organic consumers' preferences for different wine attributes and to investigate how to better motivate consumers to buy organic wine.

### Material and methods

We combined choice experiments with a questionnaire in a computer-based survey. Choice experiments are used to identify consumer preferences for specific product attributes and are based on Random Utility Theory (Louviere et al. 2000). In this research organic consumers were asked for their preferences regarding wine. The tested attributes were 'production method' (organic/conventional), 'country of origin' (France, Germany, Italy, Spain) and 'price' (2.99€/4.99€/6.99€/8.99€). The participants could choose between three types of wine – additionally they had the so-called no-choice option like in real purchase situations. This procedure was used, since forced choices had been found to be biased in favour of certain attributes (Dhar and Simonson 2003). Each of the 600 test persons completed 4 choice tasks for white and 4 for red wine.

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Afterwards, the participants answered a questionnaire on their usual purchase behaviour for wine and other personal characteristics such as socio-demographics and attitudes towards wine. The target group of this study were consumers of organic food who buy wine. Participants were recruited in front of supermarkets and interviewed immediately on the spot.

The purchase decisions of consumers in the choice experiments were analysed with Mixed Logit Models (Hensher et al. 2005). These models not only allow analysing mean preferences for product attributes but also revealing preference heterogeneity. In this study separate models were estimated for red and white wine according to the following utility function:

$$U_i = V_i + \varepsilon_i = \beta_{PR}PRICE + \beta_{QUPR}QUPRICE + \beta_{ORG}ORGANIC + \beta_{FRA}FRANCE + \beta_{ITA}ITALY + \beta_{SPA}SPAIN + \varepsilon_i$$

As outlined above, the common assumption of a strictly decreasing price utility function might not apply for wine. Therefore, we tested the assumption that price serves as a quality cue by including price as an additional square term (QUPRICE) indicating an inversed U-shaped utility function.

Additionally, the test persons' attitudes towards wine and food were analysed for their impact on preferences for organic wine. Eight attitude dimensions were extracted by means of factor analysis from the attitude statements in the questionnaire (principal component analysis, varimax rotation, extraction eigen value > 1). These dimensions were a) interest in wine, b) preference for organic food, c) doubt in low priced wine, d) price orientation, e) pleasure in wine, f) preference for local food, g) orientation by country of origin and taste, h) orientation by shape of bottle and label. These factors were integrated as covariates for the attribute 'organically produced'. Additionally, socio-demographic variables (gender, age, education and income) were tested for their influence on preferences for organic wine.

## Results

The results of the Mixed Logit Models show that test persons preferred organic over conventional wine (significant positive coefficient for 'organically produced'). However, preferences differed between participants (significant standard deviation for 'organically produced'). Two out of eight attitude dimensions had a significant impact on the preference for organic wine (significant interaction terms): As expected, preferences for organic wine were higher the higher the preferences for organic food were. Interestingly, high 'interest in wine' resulted in below-average preferences for organic wine. 'Interest in wine' comprised favourable attitudes towards certain wine attributes such as vintage, grape variety and winery. Interestingly, none of the other attitude dimensions and socio-demographic characteristics had a significant influence on the probability of choosing organic wine.

Both price terms were significant. This proved the hypothesis that the price-utility function had the form of an inversed 'U'. Wine in the middle price range (4.99€ and 6.99€) exhibited a higher purchase probability than low priced wine (2.99€). However, for high priced wine (8.99€), the purchase probability decreased.

As expected, with regard to country of origin differences existed between red and white wine. While for red wine, no significant differences between preferences for wine from Germany, France or Italy could be identified, white wine from Germany was clearly preferred over white wine from other origins.

**Table 1: Influence of production method, country of origin and price on the purchase decision for wine (Mixed Logit Models)**

	Variable	Red wine	White wine
Attributes	Organically produced (Reference: conventionally produced)	1.77**	2.12**
	Country of origin: France	- 0.15	- 1.52**
	Italy	- 0.09	- 1.33**
	Spain (Reference: Germany)	- 0.67**	- 2.59**
	Price	1.27**	1.22**
	Squared Price	- 0.12**	- 0.12**
Standard deviations	Organically produced	1.02**	1.59**
	France	1.06**	1.28**
	Italy	0.97**	1.03**
	Spain	1.36**	1.51**
	Price	0.38**	0.49**
Interaction terms	Interest in wine x organically produced	- 0.20*	- 0.31*
	Organic production as purchase criterion x organically produced	0.80**	0.77**
Further information	Log-Likelihood	- 1,660	- 1,348
	McFadden Pseudo-R-Square	0.22	0.27

\*  $P < 0,05$ ; \*\*  $P < 0,001$ ;

## Discussion and conclusions

The results of this study partly contradict the findings of earlier research on organic wine preferences. A Swiss study (Mann et al. 2012) found that wine from conventional production was preferred over organic wine. Also, people who stated to have better knowledge on wine exhibited higher preferences for organic wine. In our study, by contrast, the opposite was found: organic wine was preferred over conventional wine and higher interest in wine resulted in below-average preferences for organic wine. Hoffmann and Szolnoki (2010) found higher preferences for organic wine among people with higher income: In our study none of the socio-demographic characteristics had a significant impact. However, an important and probably decisive difference between the studies was that our study only focused on organic food consumers and not consumers in general.

Based on our results, we conclude that organic consumers generally prefer organic wine. However, organic production is only one among several criteria which determine the purchase decision for wine. Price turned out to serve as a quality indicator so that medium priced wine (4.99€ and 6.99€) was preferred over low priced wine (2.99€). That is why marketing policies aiming at addressing new consumers should not follow a low price strategy. Instead, quality attributes should be promoted. Consumers turned out to be willing to pay adequate prices for good wine. Preferences for organic wine seemed to be lower among people with higher interest in wine. This might point towards a bad image of organic wine among people who are interested in wine. This problem should be addressed by intensive communication at the point of purchase, such as presentations and tastings. However, the reason might also be a limited product range and a lack of varieties of offered organic wine.

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