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Title
Are wine choices and willingness to pay influenced by wine evoked emotions?

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Conference Presentation

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Keywords
Wine evoked emotions, taste, organic wine, consumers' wine preferences, willingness to pay, hypothetical bias, DCE

Research Question
Are wine choices and willingness to pay influenced by wine taste and evoked emotions?
Are discrete choice experiments subjected to hypothetical bias?

Methods
We combined a discrete choice experiment (DCE), a blinded wine tasting and a facial expression analysis

Results
We found interesting results that improved our understanding of consumers' preferences for wine and contributed to the application of DCEs for eliciting preferences

Abstract
Global market for organically grown wine is growing rapidly and winemakers need to better understand consumer perception, attitudes, and purchase intention towards this typology of wine to respond to the worldwide trend. The present work aimed to inform and to assist them assessing consumers' preferences and willingness to pay for three different red wine typologies, including conventional, organic and selected vintage organic wine in the context of habitual purchase (not of special occasion) in Catalonia. It focused on the effect of taste on consumers' purchase behaviours and willingness to pay for each of the three wines.

For these ends, we combined a discrete choice experiment (DCE) and a blinded wine tasting among 178 regular red wine drinkers. We used young Tempranillo red wine from Catalonia which were experimental wines from 2017 harvest. The wines were produced exclusively for this study and the only difference between the wines was the production system (conventional, organic, and selected vintage organic wines). This is why we only considered two wine attributes for this DCE: price (€3.5; €5; €6.5; €8) and production system (conventional, organic, and selected vintage organic wines). We used Ngene design software to generate a D-efficient design with nine choice occasion (sets) that allowed estimating the main effects of each level and attribute. We added a holdout choice set to test the predictive performance of the estimated choice model. Therefore, each respondent was required to answer a total of ten choice occasions. In each choice set, participants were asked to choose between three wines (conventional, organic, and selected vintage organic wines) and an opt-out option (no-choice).

A pre and post taste DCE were conducted and a comparison between pre and post responses was undertaken to measure the effect of wine taste on wine repurchase. First, participants were explained the difference between the three wine typologies, then, they were asked to complete the DCE (pre) without tasting the wines. Once participants finished completing the DCE (pre), they were asked to rate their expectations of the different wines in a nine-point hedonic scale of liking. Then, they were invited to a blinded wine tasting where they tested (in different order by group) the different wines without receiving information about the wines' identities (production system) and they rated the different wines in a nine-point hedonic scale of liking. Participants were then informed about the wines' identities and asked to complete again the same DCE (post). We compared expectations (before tasting) and actual liking (after tasting) to test whether deception (disappointment) with wine taste affects wine choices.

The ability of DCEs to predict consumers' actual behaviors was evaluated in the literature and the findings were mixed. For this reason, we tested for hypothetical bias in the present work comparing consumers' wine choices (private good) in a hypothetical (payment was not required) and a non-hypothetical DCE (payment was required). In particular, we subjected half (n=89) of the sample to a nonhypothetical experiment and the other half (n=89) to a hypothetical experiment. Before starting the experiment, participants subjected to the nonhypothetical choices received a monetary compensation of €10 for their participation in the study and were informed that at the end of the task, a session (pre or post-taste test DCE) and a choice set will be randomly selected and they would have to pay for a bottle of the wine that would be selected. They were informed that the value of the bottle of wine they win will be subtracted from the €10 they previously received. In the case of the hypothetical experiment, participants did not received money or required to buy wine but they were given a cheap talk to explain them the problem of hypothetical bias in consumers' studies and to invite them to behave as they do it in real life when they are at the supermarket. An opt-out reminder is added in each choice occasion to reduce hypothetical bias. Moreover, a follow-up certainty question was added to understand how sure participants were about their decisions.

Furthermore, we analyzed and tested whether wine evoked emotions are different for the three wine typologies and if wine evoked emotions affect consumers' wine purchase intentions and willingness to pay. We used an implicit method based on facial expression analysis to measure consumers' facial emotions stimulated by tasting the three different wines. It is a facial analysis software which uses sensors to capture infrared and video streams, and then processes these streams using algorithms. The software classified the obtained data into the following emotional categories: anger, contempt, disgust, fear, joy, sadness, surprise and valence. We used the intensities of these emotions to explain wine choice in the second DCE (post).

We found that organic wines (organic and selected vintage organic wines) were preferred to conventional wines. We also found that consumers' repurchasing intentions were significantly affected by the wine taste. Consumers' preferences and willingness to pay within-subject treatment (hypothetical vs. non-hypothetical) were statistically different (hypothetical bias). Correlation between consumers' willingness to pay and wine evoked emotions has been checked. Moreover, wine evoked emotions were compared to expected liking and actual liking. We found interesting results that improved our understanding of consumers' preferences for wine and contributed to the application of DCEs for eliciting preferences. The details of the results will be presented at the conference. Our findings provided producers and marketers with useful information and assist them to adapt the appropriate pricing and communication strategy and to target the potential consumers.

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