

## **Influence of Price and Decision Style on Wine Quality Judgment and Purchase Intentions**

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### *Abstract:*

◦*Purpose: We sought to test if (a) price information given to participants (truthful, non-existent, or wrongful) as well as their (b) self-reported general decision styles (deliberate, intuitive) does have an influence on wine quality judgments and on purchase intentions.*

◦*Design/methodology/approach: Using a one-factorial blind tasting experiment of two wines of different quality, we have randomly assigned N= 104 subjects to three different price information groups: truthful, non-existent, and wrongful price information. In addition, deliberate and intuitive decision styles were assessed as potential moderators of wine-quality judgments and purchase intentions using psychometric instruments (Betsch, 2004).*

◦*Findings: We find that wine quality will prevail, i.e. that wine quality judgments and purchase intentions were unaffected by price information. However, decision styles do actually moderate comparative wine quality judgments and purchase intentions. While the association between intuitive decision making and wine quality judgments and purchase intentions is unaffected by price information, more deliberate decision makers are less able to discriminate the higher quality wine from the lower quality one especially when no or an incorrect price is given to them.*

◦*Practical implications: Because consumers tend (on average) to be able to discriminate between different levels of wine quality regardless of price information, the results suggest that wineries should employ value-based pricing strategies in the long run. Moreover, the results also indicate that wine quality assessments are less accurately captured by consumers using deliberate procedures (as opposed to those with an intuitive judgment style).*

**Key words:** Price information, decision style, purchase intentions.

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## 1. INTRODUCTION

It has been observed that price information can shape consumer preferences for a variety of goods, including wine. Moreover, it has been argued that intuitive decisions are faster, more economic and often also simply better than rational decisions requiring lengthy deliberation (Gigerenzer, 2007). In this paper, we try to link information content and decision style in order to determine if wine quality judgments and purchase intentions are affected by price information and decision style (e.g. if more deliberate decision-makers prevail while more intuitive decision-makers are manipulated by incorrect price information given to them).

The price-quality controversy is a long-standing debate whether extrinsic characteristics of a wine allow consumers to anticipate the sensory experience and actual enjoyment that they will eventually derive from buying and consuming a wine. Without having tasted a wine and without a complete set of quality information, extrinsic characteristics such as price or expert ratings may provide consumers with cues as to how a wine may taste.

### 1.1 Literature

For many consumers, the single most important source of information about wine quality is price (Schnabel and Storchmann 2010) and as for most goods, a higher price is typically perceived as a sign of better quality (Tellis and Wernerfelt 1987). Moreover, wine is also regarded as a creative product for which reviews of experts and critics play a significant role in guiding consumer choices. Numerous studies have shown positive associations between wine prices and expert quality evaluations (e.g. Landon and Smith, 1997; Oczkowski, 2001; Schamel and Anderson, 2003; Lecocq and Visser 2006; Hadj et al., 2008).

In actual taste experiments, both extrinsic characteristics as well as experimental designs seem to shape consumers' tastes and preferences in regards to intrinsic wine quality attributes. Siegrist and Cousin (2009) report a blind tasting experiment where participants' evaluations of a wine are influenced by wine critic's ratings only if the rating is revealed before the tasting, but not if it is revealed after the tasting. In another blind tasting experiment, Goldstein et al. (2008) observed that when no price information is given, consumers will not rate relatively expensive wines any better than relatively cheap ones. Almenberg and Dreber (2009) found that people would appreciate a wine much more if they knew it was expensive. There is also some intriguing evidence employing neuroscience and functional MRI which shows that increasing its price alone can make the same wine more pleasant to consumers (Plassmann et al., 2008). Finally, Wansink et al. (2007) report that their participants' ratings and quantity consumed were influenced by stating a different region of origin of a given wine.

Ample research does also suggest that individual differences such as personality, motives, and dispositional decision making styles do actually influence and moderate consumers' quality judgments and purchase decisions in various settings (e.g., Bosnjak, Galesic & Tuten, 2007; Orth, 2005; Mowen, 2000). Most prominently, the idea that deliberate, cognition-based judgments do in general lead to more accurate evaluations and decisions was challenged by Gigerenzer (2007). In a nutshell, Gigerenzer (2007) illustrates that in many domains, 'gut feelings', or intuitive/affective decisions, are not only fast and frugal, but do actually result in more accurate judgments, decisions, and (purchase) behaviors. While we are not aware of any previous studies on the influence of intuitive decision making on wine quality and wine purchase intention formation, we presume that the same general mechanisms are also applicable in this field.

## 1.2. Objective and Research Questions

Our objective is to investigate whether wine quality will prevail, suggesting value-based pricing strategies for wines, or whether our subjects can be manipulated by incorrect price information given to them. Moreover, we would like to examine whether this outcome is any way dependent on decision styles as a potential moderator. Accordingly, we sought to test if (a) price information given to participants (truthful, non-existent, or wrongful) as well as consumers' (b) self-reported general decision styles (rational, intuitive) does have an influence on wine quality judgments and on purchase intentions.

## 2. METHODOLOGY

In order to carry out the study, we set up a blind tasting experiment during a long night of research held at our university. We purchased two white wines (2009 vintage) from a local winery similar in terms of composition but distinct in terms of quality and price. The first wine was a cuvee of Chardonnay, Pinot Blanc, Sauvignon Blanc priced at 6€ while the second more expensive wine was a higher quality cuvee of Chardonnay, Pinot Blanc, Gewürztraminer, and Sauvignon Blanc priced at 12.50€. The wines were chilled to be of optimal drinking temperature. Moreover, the participants could not see the bottles in order to get any cues about potential prices or quality. The design of the experiment was such that the participants thought they would be served one out of three possible wine pairings. In reality, we gained the two additional pairs by giving no price information and by switching the price information around. Overall, 104 individuals representing a set of ordinary wine consumers participated in the experiment and were randomly assigned to one of the three experimental groups. In Table 1, we summarize the experimental design.

**Table 1: Experimental Design**

Experimental Groups	Price Info Given	Actual Price
Pair #1: Correct price information	6,00 Euro	6,00 Euro
	12,50 Euro	12,50 Euro
Pair #2: No price information (control)	No price info	6,00 Euro
	No price info	12,50 Euro
Pair #3: Incorrect price information	12,50 Euro	6,00 Euro
	6,00 Euro	12,50 Euro

Only knowing the price information given to them, the participants were asked to evaluate the wines according to color, smell, taste and their overall impression using 5-point Likert scales (i.e. four wine quality indicators). Then they were asked whether they would buy the wine either for themselves, buy it as a present, and if they would offer it to their guests also using 5-point Likert closed-ended response formats (i.e. three purchase intentions questions).

Furthermore, we asked the participants a series of questions on their dispositional decision making style and behavior. According to Betsch (2004), the degrees of intuitive (or affective) and deliberate (or cognition-based) decision making styles can be conceptualized as individual difference constructs applying to a broad set of behavioral contexts. Most importantly, both tendencies should be – according to Betsch (2004) - viewed as independent dimensions, and not just extreme points on a single vector. Accordingly, Betsch (2004) has developed and validated two independent scales measuring an individuals' preference for intuition and deliberation. Out of the questions developed by Betsch (2004) comprising nineteen 5-point

Likert type agree/disagree items, we used four items with high item-to-total correlations measuring the degree of intuitive decision-making, and another four with high factor loadings on the deliberate decision making construct. To derive the scale scores for deliberate and intuitive decision making, answers to the 2(deliberate/intuitive)\*4 item sets were averaged and used in the analyses.

### 3. RESULTS

For each of the seven indicators described above (four wine quality indicators, three purchase intention questions), we did compute difference scores by subtracting the values for the high quality wine from the corresponding scores of the lower quality wine. These difference scores reflecting comparative judgments were used in all further analyses. Positive scores would indicate a more favorable evaluation of the (objectively) better wine, zero scores would indicate no difference in participants' judgments, and negative scores would mean that the (objectively) lower quality wine was evaluated better.

Computed across all three experimental groups, the seven mean difference scores were all positive, indicating a more favorable evaluation of the (objectively) better wine. The mean score differences were as follows: color 0.46, smell 0.58, taste 0.56, overall evaluation 0.31, buying for oneself 0.42, buying as present 0.45, and offer to guests 0.40.

To test the main effect of price information factor on wine quality judgments and purchase intentions, we performed a series of independent ANOVA analyses (i.e., separate analyses for each dependent variable).

The nature of price information (correct, none or incorrect information) did not influence any of the seven comparative judgments. The relative judgments across experimental conditions for color ( $F = .63$ ,  $df = 2$ ,  $p = .54$ ), smell ( $F = .34$ ,  $df = 2$ ,  $p = .71$ ), taste ( $F = .12$ ,  $df = 2$ ,  $p = .88$ ) and the overall relative evaluation of the two wines ( $F = .56$ ,  $df = 2$ ,  $p = .57$ ) did not differ. Consistent with the quality judgments, purchase intentions also did not differ across the three experimental groups (buying for oneself:  $F = .28$ ,  $df = 2$ ,  $p = .07$ ; buying as present:  $F = .03$ ,  $df = 2$ ,  $p = .97$ ; offer to guests:  $F = .03$ ,  $df = 2$ ,  $p = .98$ ).

To test whether self-reported general decision styles (rational, intuitive) have a systematic influence on our dependent variables, we have correlated the intuitive scale values and the deliberate scale scores with the seven comparative judgment indicators for each experimental group. The results are summarized in Table 2 and only depict significant correlations ( $p < 5\%$ ). Positive correlations would indicate that with increased scores on the respective decision-making style dimension, the relative difference between the high versus low quality wines do also increase correspondingly. A negative correlation would mean that a more pronounced decision-making style corresponds to smaller differences between the high versus lower quality wines.

**Table 2: Correlations between decision-making styles and comparative wine judgments across experimental conditions (only significant correlations at  $p < .05$  are reported)**

Decision making styles by experimental conditions		Wine quality comparative judgments				Purchase intentions comparative judgments		
		color	smell	taste	overall	Buy for oneself	Buy as present	Offer to guests
Correct information	Intuitive							
	Deliberate							
No price information	Intuitive							
	Deliberate			- .36	- .37			
Wrong price information	Intuitive							
	Deliberate			- .39		- .38		- .48

In light of the results summarized in Table 2, it is evident that all significant correlations are negative and consistently related to the degree of deliberate decision-making style. Moreover, the negative correlations did emerge in the control condition (no price information) and in the wrong price information condition only. In the control condition, the degree of deliberate decision making was correlated with comparative taste ( $r = -.36$ ) and overall wine quality evaluation ( $r = -.37$ ). In the wrong price information group, negative correlations emerged for taste ( $r = -.39$ ), and for two purchase intentions comparative judgments ( $r = -.38 / -.48$ ).

Overall, the results summarized in Table 2 suggest that intuitive decision making and comparative judgments are unrelated across all price information conditions. In contrast, as the amount of rational decision making increases, the ability to discriminate the higher quality wine from the lower quality one decreases, namely when no or an incorrect price is given to subjects.

#### 4. SUMMARY AND DISCUSSION

In this paper, we tested if the price information content given to participants (truthful, non-existent, or false) as well as their self-reported general decision style (deliberate vs. intuitive) has an influence on wine quality judgments and on purchase intentions. As a first result, we find that wine quality prevails, i.e. consumers' quality judgments and purchase intentions on average tend to be unaffected by price information factor. As an implication, this result suggests that wineries ought to employ value-based pricing strategies when marketing their wines. That wineries actually do this, i.e. price their product based on the value it creates for the customer is reinforced by numerous hedonic studies examining consumer willingness to pay (e.g. Oczkowski, 2001; Schamel and Anderson, 2003; Lecocq and Visser 2006). Over time, maturing wine markets and competition will assure that prices also have to meet wine quality and value expectations of consumers. It is also in line with evidence suggesting that wine prices serve as signals which over time respond positively to quality and negatively to increasing information levels (Bagwell and Riordan, 1991; Schnabel and Storchmann, 2010).

As a second result, we obtain that decision styles actually moderate comparative wine quality judgments and purchase intentions. While the association between intuitive decision making and wine quality judgments as well as purchase intentions is unaffected by price information, more deliberate decision makers are less able to discriminate the higher quality wine from its lower quality counterpart especially when prices are not revealed or false. Thus, gut decisions also work with wine.

We also note that our first result is in contrast to studies reporting that prices affect “taste” (e.g. Plassman et al, 2008; Goldstein et al, 2008, Almenberg and Dreber, 2009). While our experiment gave participants a clear choice between two wines similarly composed but distinct in terms of quality and price, it will require further investigation, to see how consistent this result is using other wine styles and varying experimental settings.

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