Consumers’ Choice Formulation Under Risk: a Competence-Based Perspective

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Researchers have long believed that consumers manage risk associated with a purchase by acquiring information that helps them make more precise estimates of the product value. In five experiments, we show conditions under which consumers based their choice on either a ranking-based standard (vertical attribute) or personal preference (horizontal attribute).

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EXTENDED ABSTRACT

One of the most general approaches to studying consumer choice under risk is based on the assumption that consumer are rational value maximizers (i.e., people prefer larger over smaller expected returns) and prefer smaller risks over larger risks (Pratt 1964). A standard assumption in this literature is that risk is negatively associated with the attractiveness of an option (March and Shapiro 1987). One way via which individuals can reduce uncertainty associated with the expected outcome is by acquiring information that can help them to make more precise estimates of the product value (Aqueveque 2006; Conchar et al. 2004; Erdem and Swait 2004; Peterson and Merino 2003; Taylor 1974). Based on this line of reasoning, consumers’ choice formulation under risk should be based on information that provides a clear ranking-based standard for product evaluation (e.g., a camera’s resolution; a vertical product attribute) rather than on information that does not affect the actual performance of the product (i.e., a camera’s design, a horizontal product attribute).

We offer an alternative account of choice under risk which predicts that consumers facing trade-offs between horizontal and vertical attributes shift their focus from vertical to horizontal product attribute information when the purchase involves higher levels of risk. Drawing upon research on the ambiguity effect (Ellsberg 1961; Heath and Tversky 1991; Klein et al. 2010), we show that consumers favorable perceptions of their own competence may lead consumers facing higher levels of risk to more positively value an attribute that reflects their own preference (one that they are knowledgeable and feel competent about) but that does not necessarily improve product performance than an attribute that unambiguously indicates product performance. We test these competing accounts of choice under risk in 5 experiments.

In Experiment 1, participants chose between a digital camera with higher brand equity (i.e., horizontal attribute) and lower resolution (i.e., vertical attribute) and a digital camera with lower brand equity and higher resolution. We observed greater preference for the choice with lower resolution and better brand in the high-risk condition (32.0%) than in the low-risk condition (10.7%; χ²(1) = 3.64, p < .05). To rule out the possibility that “brand name” lowers one’s risk because it may be a proxy for a bundle of vertical attributes, we ran a second experiment (Experiment 2) where participants chose between a refrigerator featuring a less desirable color (i.e., horizontal attribute) and larger capacity (i.e., vertical attribute), and a refrigerator featuring a more desirable color but smaller capacity. Participants were more likely to choose the refrigerator with the more desirable color and lower capacity in the high-risk condition (54.1%) than in the low-risk condition (33.3%; χ²(1) = 3.18, p < .05). Given that our results depend on the assumption that consumers are facing true trade-offs, we ran a second version of Experiment 2 where subjects’ preference for the horizontal attribute was obtained prior to the risk manipulation. The results show that the magnitude of the effect was amplified as a larger proportion of participants faced a true trade-off. To rule out an alternative explanation based on the salience of information available to process (i.e., consumers may attend to perceptual cues featuring greater salience in face of greater risk), we ran a version of experiment 2 with the color and the overall capacity of the refrigerator presented in text form only (instead of pictures). Results replicated those of experiment 2, ruling out the perceptual salience alternative explanation. Surprisingly, these results are observed despite participants’ own intuition that information about vertical (vs. horizontal) attributes should be more diagnostic when making a choice under risk (as measured in a pretest). In experiment 3, we focus on providing additional process evidence for the predicted mechanism by showing that consumers rate themselves to be more knowledgeable on horizontal product attributes than on vertical product attributes under greater levels of risk (no-learning condition). However, if consumers become more knowledgeable about the vertical attribute (learning condition), then such increase in competence should produce a reversal of the direction of the effect observed in the previous experiments. For participants in the no-learning condition, we observed greater preference for the refrigerator with the more desirable color and lower capacity in the high-risk condition (45.0%) than in the low-risk condition (20.0%; χ²(1) = 2.85, p < .05). In contrast, participants in the learning condition were less likely to choose the refrigerator with the more desirable color and smaller capacity in the high-risk condition (18.2%) than in the low-risk condition (45.0%; χ²(1) = 3.53, p < .05). To test the effect of felt competence on choice, we ran an ordinal logistic regression on the ranking of perceived competence about the vertical attribute, the attribute which was the focus of the learning manipulation. This analysis revealed a significant interaction between the risk and learning factors (Wald χ²(1) = 5.66, p < .01). An examination of the predicted probability of an upward increase in ranking showed that, in the learning condition, overall capacity had a greater probability of being ranked higher in the high-risk condition (49.6%) than in the low-risk condition (25.9%; χ²(1) = 3.35, p < .05). In contrast, in the no-learning condition, overall capacity had a greater probability of being ranked higher in the low-risk condition (37.5%) than in the high-risk condition (19.7%; χ²(1) = 2.63, p = .05). This pattern of perceived competence with the vertical product attribute along with the reversal in choice proportions across learning conditions is consistent with the competence hypothesis.

Counter to marketers’ intuition and prior literature, this research demonstrates that product information that does not objectively affect the actual performance of the product may actually become more important in a choice decision associated with higher levels of risk. This effect stems from the belief that people tend to have favorable perceptions of one’s competence, which is argued to become more preferable under risky purchase situations. It stems from our results that, all else equal (e.g., production costs) horizontal differentiation, i.e., differentiation based on consumers preferences, may be more effective than vertical differentiation, i.e., differentiation based on rank-ordered attributes, in purchases involving higher levels of risk. Our results are of particular importance for products and services for which the value proposition is based on vertical attributes that cannot be unambiguously discerned by consumers (e.g., internet speed, processor capacity, etc.).

REFERENCES


Table 1: Choice Proportions

<table>
<thead>
<tr>
<th>No-Learning</th>
<th>Experiment 1</th>
<th>Experiment 2A</th>
<th>Experiment 2B</th>
<th>Experiment 2C</th>
<th>Experiment 3</th>
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<tr>
<td>Low Risk</td>
<td>10.7%</td>
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<td>33.3%</td>
<td>66.7%</td>
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<tr>
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<td>68.0%</td>
<td>54.1%</td>
<td>45.9%</td>
<td>73.1%</td>
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Learning

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<thead>
<tr>
<th></th>
<th>Experiment 1</th>
<th>Choice A</th>
<th>Experiment 2A</th>
<th>Choice B</th>
<th>Experiment 2B</th>
<th>Choice A</th>
<th>Experiment 2C</th>
<th>Choice B</th>
<th>Experiment 3</th>
<th>Choice A</th>
<th>Choice B</th>
</tr>
</thead>
<tbody>
<tr>
<td>Low Risk</td>
<td></td>
<td>45.0%</td>
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<td>55.0%</td>
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<tr>
<td>High Risk</td>
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<td>18.2%</td>
<td>81.8%</td>
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*Note: Choice A (more preferable horizontal attribute), Choice B (more preferable vertical attribute)*


