An Experimental Test of a Search Model under Knightian Uncertainty

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Abstract

This paper's objective is to design a laboratory experiment to study the effect of Knightian uncertainty on a subject's search behavior in a finite-horizontal search model and test the implications obtained in Nishimura and Ozaki (2004). Our finding is that the average search duration is shorter when there is Knightian uncertainty in the sense that the true point distribution is unknown to subjects, compared to when the point distribution is known. The estimate of the probability of accepting an offered point confirms that subjects are more likely to accept the offered point when the point distribution is unknown than when the point distribution is commonly known in advance. These results support the prediction of Nishimura and Ozaki (2004). In addition, we find direct evidence that subjects reduce their own reservation point with ambiguity of the point distribution, supporting the implication of Nishimura and Ozaki (2004). In addition, we test whether or not subjects engage in search activity according to the optimal stopping rule.

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Keywords: experiment, search model, ambiguity, and optimal stopping rule.

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