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How Search Cost Reduction Impacts Consumers' Decision Quality: Evidence from a Natural Experiment

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How Search Cost Reduction Impacts Consumers' Decision Quality: Evidence from a Natural Experiment

Research-in-Progress

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ABSTRACT

Many online platforms have used information technology such as AI to reduce consumers' information search cost and facilitate their decision-making. Given the variety of online information, such technology is often effective for only specific information types. For rational consumers, search cost reduction always leads to better decision making. However, prior studies show that consumers may exhibit behavioral biases in decision making. In this study, we propose that search cost reduction for partial information can induce cognitive miser behavior in consumers, which leads to worse decision making. To uncover this understudied puzzle, we leverage a natural experiment on Yelp to examine the effect of search cost reduction of partial information on consumer decision quality. By constructing a unique panel dataset based on matched pairs of restaurants across Yelp and TripAdvisor, we apply a difference-in-differences (DID) design to casually infer how consumer decision quality is affected by the sorted images feature which was introduced by Yelp in August 2015 to reduce consumers' search cost of review images. We find that displaying sorted images has a negative effect on consumer decision quality. Diving deeper into consumer complaints through deep learning techniques, we further find that the inferior decision quality of consumers after the introduction of the sorted images feature is mainly attributed to their reduced awareness of restaurants' service quality—information that is available in review texts but not in review images. Our findings suggest that search cost reduction of partial information may hurt consumers, because it may induce cognitive miser as consumers pay disproportionate attention to product information for which the search cost has been reduced, but pay less attention to other product information. We discuss the implications of these findings for platforms.

Keywords

Search cost, online platforms, sorted images, decision making, artificial intelligence, difference-in-differences