Marketing Colloquia
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12:00 PM to 1:20 PM
Zoom

ALGORITHMIC DISCRIMINATION IN SERVICE

ABSTRACT: The goals of this research are:

1. to examine how service discrimination can emerge from algorithmic decision-making,
2. to investigate how service discrimination interacts with consumer word-of-mouth to affect demand and profits, and
3. to explore public policy and managerial implications of algorithmic discrimination in service outcomes.

By employing a mixed-methods approach, the authors develop a theory demonstrating that discrimination can be profitable in the short-run, but can backfire in the long-run. An agent-based model shows the macro-level implications on demand and profits resulting from micro-level decisions based on biased algorithms. This research demonstrates that although there can be a short-term profit advantage from discrimination in service, non-discriminatory service providers can earn higher long-term profits, on average, than discriminatory service-providers when factoring in consumer word-of-mouth and competition. Large error in measuring consumer quality (value or profitability to the firm) exacerbates service discrimination, while large intra-group variation in consumer quality attenuates discrimination. This research emphasizes the long-term benefits of switching to a service policy that does not use group identity information in algorithmic decision-making, as well as incorporation of word-of-mouth considerations in the firm's objective function. However, for firms that must persist in using group identity information, this research recommends increasing investment in methods of measurement error reduction and increasing exposure to consumers of different populations. By doing so, a firm could reduce service discrimination while improving its long-term profits and societal well-being.