

Can the digital advertising market achieve privacy without regulation?

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It's a common assumption among marketers that if you can customize any form of marketing, particularly mobile advertising, you'll get better results. With this in mind, mobile marketing relies significantly on user tracking data as a cornerstone advertising strategy.

New research has looked into the value of user tracking data for targeting purposes and offered some insights about the privacy outcomes of such activities in a multisided [mobile advertising](#) market. This not

only represents new thinking on marketing strategy, but could help mitigate certain societal concerns over [privacy issues](#) and the use of certain tracking data in mobile advertising.

The research study, "Targeting and Privacy in Mobile Advertising," is to be published in the March issue of the INFORMS journal *Marketing Science*. It is authored by Omid Rafieian of Cornell University and Hema Yoganarasimhan of the University of Washington.

The study found that a [machine learning](#)-based targeting approach improves the average click-through rate by more than 66.8% compared to simpler targeting models.

"The difference mainly stems from behavioral information as opposed to contextual information," said Rafieian. "What this means is that the machine-learning approach is able to learn user preferences from their past behavioral data, such as the ads they have seen and clicked on. Unlike traditional approaches, machine-learning methods do not put restrictive assumption on user behavior, and in turn, are able to identify more complex patterns in user preference."

"Once we established the effectiveness of our [machine-learning approach](#), we turned to the privacy question: can we expect any stop on behavioral targeting and user tracking in this market?," said Yoganarasimhan. "What we found was that although behavioral targeting helps advertisers find better match with impressions, the ad network may want to protect consumer privacy and not allow very granular behavioral targeting for economic reasons. This is because too much targeting can result in softer competition between advertisers, where each [advertiser](#) cherry-picks narrow segments, thereby leading to lower revenues for ad networks."

The research used large-scale data from a leading in-app network of a

country in Asia. Study authors created a machine-learning framework for targeting that uses both contextual and behavioral information.

They conducted a comprehensive comparison between the value of contextual and behavioral targeting from different players' viewpoints. The key insight from the paper was a misalignment between what ad networks and advertisers want: while advertisers demand more privacy-invasive targeting tools, ad networks have natural economic incentives to limit behavioral targeting to increase competition between advertisers. This hints at a future where the market can self-regulate and protect consumers' [privacy](#).

More information: Omid Rafieian et al. Targeting and Privacy in Mobile Advertising, *Marketing Science* (2020). [DOI: 10.1287/mksc.2020.1235](#)

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