Researchers find that cookies increase ad revenue for online publishers

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How long has it been since you logged onto a Web site and you were prompted to decide whether to opt out of "cookies" that the site told you will enhance your online experience? Minutes? Hours?

While you may be familiar with the term, you may not completely know what a cookie is or what it does. A computer "cookie," also known as a web cookie, Internet cookie or browser cookie, represents data packets that are sent to your computer to help a website track your visits and activity. As a result, the site is better able to track items in your shopping cart when browsing an e-commerce site, or personalize your user experience on the website so that you are more likely to see content and ads you want to see.

New research has explored the real value of the cookie to websites, advertisers, and found that cookies represent higher revenue to online publishers. According to the study, there is a 52 percent reduction in advertising revenue to publishers when cookies are eliminated through Internet user opt-out protocols. On the other hand, when cookies are present, publishers' ad pricing doubles.

The study, to be published in the January edition of the INFORMS journal *Marketing Science*, is titled "Consumer Privacy Choice in Online Advertising: Who opts out and at what cost to industry?" It is authored by Garrett Johnson of Questrom School of Business at Boston University; Scott Shriver of the Leeds School of Business at the University of Colorado; and Shaoyin Du of the Simon Business School at the University of Rochester.

According to the study authors, while most Americans decide not to opt-out of online advertising, 0.23 percent of American online ad impressions arise from users who decide to opt out of online ads. These users, in effect, have opted out of the use of cookies to track their online navigation of a particular site. This group was the focus of the study's research to determine the impact of cookie removal on publishers.

In 2010, the American advertising industry decided to self-regulate by implementing its AdChoices program. This is where consumers are given the option to opt out of online advertising based on users' behavior, simply by clicking the overlaid "AdChoice" icons on ads.

"In addition to finding that only a small percentage of Americans actually decided to opt out of online ads, one of our more important findings was that opt-out user ads tend to fetch 52 percent less revenue on the transaction than do comparable ads for users who allow behavior targeting, or opt in," said Johnson.

The study authors calculate that the inability to behaviorally target opt-out users results in a loss of roughly $8.58 in ad spending per American opt-out consumer. This cost is covered by publishers and the AdChoices exchange.

For context, while the American advertising industry maintains an opt-out system, European regulators favor an opt-in policy through the General Data Protection Regulation (GDPR) which requires users to provide consent before they see an ad targeting them.

"This study provides the first evidence of the adoption rate of AdChoice, which is 0.23 percent of American impressions," said Shriver. "More specifically, we were able to uncover a privacy paradox. Consumers' stated preferences overstate actual preference measures they take to assure their privacy. Multiple surveys show that about two-thirds of American consumers oppose online behavioral advertising, and 20 percent even claim to have opted out using AdChoices. Still, actual opt-out rates are much lower."

"Though few users tend to opt out, we note that certain types of users are more likely to opt out, and that has certain consequences for the advertising industry," said Du. "We find that opt-out rates are higher among users who install non-default browsers, such as Firefox and Chrome, which tells us that opt-out users are likely more technologically sophisticated. We also note substantial variation in opt-out rates by region by city and state and by certain demographics."

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