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Is Voluntary Profiling Welfare Enhancing?

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Abstract

Although consumer profiling advocates tout benefits from personalization, consumer advocacy groups oppose profiling in online markets because of concerns about privacy and price discrimination. Policies such as opt-out or opt-in that provide consumers the option to voluntarily participate in profiling are the favored compromise. We compare voluntary profiling to no profiling and show that voluntary profiling leads to some counterintuitive results. Consumers that do not participate in profiling and some that participate are worse off under voluntary profiling. Neither social welfare nor aggregate consumer surplus is necessarily higher under voluntary profiling; even when voluntary profiling leads to an increase in social welfare, it may come at the expense of consumer surplus. If the seller cannot price discriminate and charge only a uniform price for everyone or the seller can only charge different prices based on the consumer's participation status, then aggregate consumer surplus under voluntary profiling is higher and a reduction in privacy cost has a positive impact on all consumers as well as the seller. However, when personalized pricing is possible, reducing privacy cost alone may reduce aggregate consumer surplus. The primary reason for these results is that voluntary profiling allows the seller to identify high valuation consumers that have no incentive to participate and set a higher price for them (compared to no profiling) while simultaneously benefitting from the profile information of low valuation consumers that participate. However, a positive privacy cost mitigates the participation incentives of even low valuation consumers and hence sellers' ability to engage in price discrimination.

Keywords: Voluntary profiling, privacy, price discrimination, social welfare