

“Consumer Profiling via Information Design”

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Abstract

Platforms use purchase histories to profile customers, create consumer segments, and disclose them to sellers. Sellers target price offers to these segments, generating new data that enables further profiling. We characterize the platform’s ability to learn consumers’ valuations using only information design in constructing the segments disclosed to sellers. We then evaluate the implication for market outcomes. We find that there is a threshold so that the platform cannot accurately profile consumers with valuations above it but can do so for those with valuations below it. The threshold is the seller’s optimal uniform price in the no-information case. As a consequence, the use of purchase data to profile customers increases total welfare without harming consumers.