## Should Ad-Exchanges Subsidize Advertisers to Acquire Targeting Data?

by

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| DATE | 15 December 2023  (Friday) |
| TIME | 3:00 pm - 4:30 pm |
| VENUE | 4/F ISOM Meeting Room (Room 4047), LSK Business Building |

## ABSTRACT

*Large volumes of online impressions are sold daily via real-time auctions to deliver targeted ads to consumers. Advertisers use data to learn about user preferences and select the most appropriate ad for each user, which also helps them optimize their bids in an ad auction. While ad exchanges may provide some user data to advertisers, it is usually limited, and advertisers often acquire data from various sources to improve targeting performance. The acquisition of such data can significantly influence the revenue of the ad exchange, which has mainly been passive about advertisers' data acquisition processes. Previous studies have examined the impact of ad exchanges revealing their data to advertisers, but little attention has been paid to the active role that ad exchanges can play when advertisers acquire data themselves. To address this gap, we propose three subsidy frameworks to increase ad exchange revenue by inducing more advertisers to acquire data: all-subsidized (AS), winner-subsidized (WS), and loser-subsidized (LS). We analyze the impact of subsidy provisions on the platform's net revenue. Our results show that WS can be better or worse than AS, depending on the cost of data acquisition, its beneficial impact on ad selection, and how impression value is distributed.*

## BIOGRAPHY

*Wangsheng Zhu is a Ph.D. candidate in Management Science with a concentration in information systems at Naveen Jindal School of Management, University of Texas at Dallas. His research interests include designing new mechanisms and/or developing prediction-and-optimization data analytics models to address managerial challenges in markets like digital advertising, data monetization, crowdsourcing, and trip planning.*