

# When Zeros Count: Confounding in Preference Heterogeneity and Attribute Non-Attendance

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## **Abstract**

Many marketing decisions rest upon the accurate estimation of consumer preferences. The main focus in marketing literature has been on uncovering heterogeneity in consumer preferences. This paper follows a recent stream of literature and modeling approaches acknowledging that consumers may ignore subsets of attributes (termed as "attribute non-attendance" or ANA). A systematic comparison of choice models that account for both ANA and preference heterogeneity or only one of them across ten different applications reveals that ANA occurs across various settings. Neglecting it often leads to inferior in- and out-of-sample performance and biases in parameter estimates. We contribute by examining the potential direction and magnitude of the bias in heterogeneity parameters. We find that for features with preference distribution covering both positive and negative domains, neglecting ANA may result in underestimation of heterogeneity and sub-optimal pricing and targeting decisions.

**Keywords:** *Discrete choice modeling; Heterogeneity; Attribute non-attendance*

**Track:** Methods, Modelling & Marketing Analytics