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ABSTRACTS

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Accounting for deficit in ABC-XYZ analysis

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Abstract

This work proposes an ABC-XYZ-type analysis modified with an observed merchandise deficit. The deficit is determined by right censoring. This manuscript proposes to account for right censoring in the ABC-XYZ analysis. This modified ABC-XYZ analysis updates many important quantities: the projected income, the coefficient of variation, and a nonparametric Kaplan-Meier estimate. An illustrative example shows that the classical ABC-XYZ algorithm underestimates the merchandise value where the deficit was observed; the magnitude of the coefficient of variation is also underestimated. The new method mitigates this issue and recalculates the overall profit and the coefficient of variation, taking into account not just the actual observed sample but the estimated overall market demand.