
Auxiliary information : the raking-ratio empirical process

Mickael Albertus*¹ and Philippe Berthet¹

¹IMT – Université Paul Sabatier - Toulouse III – France

Résumé

We study the empirical measure associated to a sample of size n and modified by N iterations of the raking-ratio method. The empirical measure is adjusted to match the true probability of sets in a finite partition which changes each step. We establish asymptotic properties of the raking-ratio empirical process indexed by functions as $n \rightarrow +\infty$, for N fixed. A closed-form expression of the limiting covariance matrices is derived as $N \rightarrow +\infty$. Then an asymptotic Gaussian approximation we use also yields uniform Berry – Esseen type bounds in n, N and sharp estimates of the uniform quadratic risk reduction. In the two-way contingency table formulas characterizing the limiting process are every

*Intervenant