Ranked set sampling and Rao-Hartley-Cochran strategies using the randomized procedure of Ryu-Kim-He-Park

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Abstract

Two Randomized Response sampling models are developed using the scrambling procedure proposed by Ryu-Kim-He-Park are developed. At first we consider the Rao-Hartley-Cochran (RHC) strategy and the estimators of the means is developed. Afterwards Ranked Set Sampling (RSS) design is used and the corresponding estimators is obtained. The corresponding variances are derived and the efficiency of RSS against RHC procedure is studied.

Keywords: unequal probabilities design, unbiasedness, RSS.

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