New Pool-shrinkage Entropy Estimator for Mean of Exponential Distribution Under Different Loss Functions

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ABSTRACT

In this paper, a new pool-shrinkage estimator of entropy function for mean of an exponential distribution is proposed. A progressive Type censored sample is taken to obtain the estimator. For the new estimator, risk functions and relative risk functions are developed under symmetric and asymmetric loss functions, viz. squared error loss function and LINEX loss function. And new estimator is shown to have better performance than a classical estimator in terms of relative risk.

Keywords: Exponential distribution, entropy function, shrinkage estimation, progressive type-II censored sample, squared error loss function and LINEX loss function.