

# INADMISSIBILITY OF THE UNCOMBINED TWO-STAGE ESTIMATOR WHEN ADDITIONAL SAMPLES ARE AVAILABLE

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**Abstract.** Consider the problem of constructing an estimator with a preassigned bound on the risk for a mean of a normal distribution. The paper shows that the usual two-stage estimator is improved on by combined estimators when additional samples taken from distributions with the same mean and different variances are available.

*Key words and phrases:* Two-stage procedure, inadmissibility, common mean.