论文

MOMENT-METHOD ESTIMATION BASED ON CENSORED SAMPLE

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摘要   In reliability theory and survival analysis, the problem of point estimation

based on the censored sample has been discussed in many literatures. However, most of

them are focused on MLE, BLUE etc; little work has been done on the moment-method

estimation in censoring case. To make the method of moment estimation systematic and

unifiable, in this paper, the moment-method estimators(abbr. MEs) and modified

moment-method estimators(abbr. MMEs) of the parameters based on type I and type II

censored samples are put forward involving mean residual lifetime. The strong

consistency and other properties are proved. To be worth mentioning, in the

exponential distribution, the proposed moment-method estimators are exactly MLEs. By

a simulation study, in the view point of bias and mean square of error, we show that

the MEs and MMEs are better than MLEs and the ``pseudo complete sample'' technique

introduced in Whitten et al.(1988). And the superiority of the MEs is especially

conspicuous, when the sample is heavily censored.

关键词   Reliability theory, survival analysis, m

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