

RELATIVE LOSS OF INFORMATION AND EFFICIENCY OF CENSORED LIFE TESTING EXPERIMENTS BASED ON SUFFICIENT STATISTICS

HATIM SOLAYMAN MIGDADI

Department of Mathematics, Faculty of Science and Information Technology, Jadara University, Irbid, Jordan

ABSTRACT

In this paper, sufficient statistics are proposed to measure the amount of information in censored and progressively censored data. Under specified life testing experiments, the sufficient statistics are obtained and used to identify the relative losses of information and the efficiency due to the censoring schemes. Comparisons between the different censoring mechanisms, the main affecting factors in the amount of information and the validity of sufficient statistics as measures of information are explored through both theoretical and numerical results.

KEYWORDS: Progressively Censored Data, Relative Efficiency, Relative loss of Information, Sufficient Statistic Type I and Type II Censored Data