Exponential goodness of fit test based on Lin-Wong divergence on type-I censored data

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Abstract. Goodness of fit tests provides guidance for evaluating the suitability of a potential input model. Exponential testing in goodness of fit test field has long been an interesting issue in statistical inferences. This paper presents the Lin-Wong divergence as our proposed measure of distance between distributions and compared its powerful with that of other well-known distance measures using the empirical distribution function and Shannon entropy concept such as Anderson-Darling, Cramer-von Misses, Kolmogorov-Smirnov and Kullback-Leibler. Finally, the use of proposed test is shown in an illustrative example.

Keywords: Anderson-Darling, Goodness of fit test, Lin Wong divergence, Exponential distribution, Type-I censored scheme.