

Kanisa Chodjuntug 2008: Comparison of Goodness of Fit Tests for the Exponential Distribution When the Data are Grouped. Master of Science (Statistics), Major Field: Statistics, Department of Statistic. Thesis Advisor: Mrs. Ampai Thongteeraparp, Ph.D. 122 pages.

The purpose of this research is to compare the power of Goodness of Fit Tests for the Grouped Exponential Distribution. The tests studied include the Weighted Kolmogorov-Smirnov statistic, Kolmogorov-Smirnov statistic Anderson-darling statistic Cramer-von Mises statistic Chi-square statistic and Chi-squared components statistic. The studied data are composed of Exponential distribution, Weibull distribution and Gamma distribution. The sample size are 30, 50 and 100. These samples are classified as interval 6, 7 and 10. The specified significance levels are 0.01 and 0.05. Each characteristic of data is generated by Monte Carlo simulation technique 1,000 times. Simulation studies show that the best for control the type I error are Weighted Kolmogorov-Smirnov statistic and Chi-squared components statistic. Next in rank is Chi-square statistic Anderson-darling statistic Cramer-von Mises statistic and Kolmogorov-Smirnov statistic. For highest power of test are Weighted Kolmogorov-Smirnov statistic Anderson-darling statistic and Cramer-von Mises statistic. Next in rank is Chi-square statistic and Kolmogorov-Smirnov statistic. The Chi-squared components statistic have the lowest of the power of test.

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Thesis Advisor's signature

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