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SUKANYA NOOKLAM : POWER OF THE TEST FOR TESTING MEAN WITH POSITIVE SKEWED POPULATION. THESIS ADVISOR : ASSIST. PROF. CAPT. MANOP VARAPHAKDI, THESIS COADVISOR : ASSO. PROF. SORACHI PISARNBUT, Ph.D. 124 pp. ISBN 974-334-043-2.

The purpose of this research is to compare the power of the tests of Student's t test, Johnson's t test, and Modified Johnson's t test for testing the mean of a population having a positive skewed distribution. The distribution under study is Tukey's Lamda distribution with five levels of skewness (0.25, 0.50, 1.00, 1.50, and 1.80), six levels of kurtosis (2.4, 4.0, 6.0, 8.0, 10.0, and 12.0), and population mean $\mu = \mu_0 + k(\sigma/\sqrt{n})$, $\mu_0 = 100$, k = 0.5, 1.0, 2.0, $\sigma^2 = 100$, and sample size n = 10, 20, 30, 50, 70. The levels of significance are 0.01, 0.05, and 0.10. In this research, the Monte Carlo Simulation Technique is used by repeating the experiment 1,000 times for each case.

Results of the study are as follows :

1. For all cases, Modified Johnson's t test is the most powerful test.

2. In the following cases, we may use Student's t test instead of Modified Johnson's t test which the power of the test of Student's t test is nearly the same as the power of the test of Modified Johnson's t test.

- Sample size is more than 50 and/or
- Skewness is less than 0.50 and kurtosis is in [2.4, 6.0].

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