

سمینار هفتگی گروه آمار

Comparing the empirical power of several independence tests in the generalized FGM family

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خلاصه:

The powers of some tests for independence hypothesis against positive (or negative) quadrant dependence in the generalized Farlie-Gumbel-Morgenstern distribution are compared by simulation. Some of these tests are usual linear rank tests of independence. Also, two other possible rank tests of independence are the locally most powerful rank test and a powerful nonparametric test based on Cramer-von Mises statistic. Moreover, we evaluate the empirical power of the class of distribution-free tests proposed by Kochar and Gupta (1987) based on the asymptotic distribution of a U-statistic and the test statistic proposed by G \ddot{u} iven and Kotz (2008) in the generalized Farlie-Gumbel-Morgenstern distribution. Also, the tests of independence are compared via a simulation study for sample sizes $n = 10; 20; 30; 50$. Finally, we apply two examples to illustrate the results.