

A CLASS OF WEIGHTED RANK CORRELATION MEASURES

BY

MAJID SANATGAR (YAZD), ALI DOLATI (YAZD), AND
MOHAMMAD AMINI (MASHHAD)

Abstract. We propose a class of weighted rank correlation measures extending Spearman's rho. This class consists of two types of measures. The first type, which extends Blest's rank correlation, places more emphasis on the agreement in top ranks. The second one places more emphasis on the agreement in the bottom ranks. The asymptotic distribution of the proposed measures and some of their properties are studied. A simulation study is performed to compare the performance of the proposed statistics for testing independence by using asymptotic relative efficiency calculations.

2020 Mathematics Subject Classification: Primary 62H20; Secondary 62H05.

Key words and phrases: weighted rank correlation, copula, asymptotic distribution.

THE FULL TEXT IS AVAILABLE HERE