

DURBIN-WATSON STATISTIC IN ROBUST REGRESSION

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Abstract: It is shown that the lower and upper critical values of the Durbin-Watson (D-W) statistic are asymptotically the same for the analysis based on M -estimators as for the classical least squares analysis. Moreover, the paper offers a possibility to make an idea when the asymptotics may start to work. Considering the B -robust optimal ϕ -function, we demonstrate that the differences between the precise critical values of Durbin-Watson statistics evaluated for residuals corresponding to the M -estimate and critical values which were found by Durbin and Watson for the least squares analysis are rather small even for moderate sample size.

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