**Abstract:**
The behavior of rank procedures in measurement error models was studied – if tests and estimates stay valid and applicable when there are some measurement errors involved and if not how to modify these procedures to be able to do some statistical inference. A new rank test for the slope parameter in regression model based on minimum distance estimator and an aligned rank test for an intercept were proposed. The (asymptotic) bias of R-estimator in measurement error model was also investigated. Besides measurement errors the problem of heteroscedastic model errors was considered – regression rank score tests of heteroscedasticity with nuisance regression and tests of regression with nuisance heteroscedasticity were proposed. Finally, in location model tests and estimates of shift parameter for various measurement errors were studied. All the results were derived theoretically and then demonstrated numerically with examples or simulations.