Tests of No Cross-Sectional Error Dependence in Panel Quantile Regressions

Prof. Dr. Mehdi Hosseinkouchack

This paper argues that cross-sectional dependence is an indicator of misspecification in panel quantile regression rather than just a nuisance that may be accounted for with panel-robust standard errors. This motivates the development of a novel test for panel quantile regression misspecification based on detecting cross-sectional dependence. The test possesses a standard normal limiting distribution under joint N, T asymptotics with restrictions on the relative rate at which N and T go to infinity. A finite sample correction improves the applicability of the test for panels with larger N. An empirical application to housing markets illustrates the use of the proposed cross-sectional dependence test.