

Seminario Aleatorio
Sesión 380

Spurious multivariate regressions under fractionally integrated processes

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Abstract

This article studies spurious regression in the multivariate case for any finite number of fractionally integrated variables, stationary or not. We prove that the asymptotic behavior of the estimated coefficients and their t-statistics depend on the degrees of persistence of the regressors and the regressand. Nonsense inference could therefore be drawn when the sum of the degrees of persistence of the regressor and regressand is greater or equal than $1/2$. Moreover, the asymptotic behavior from the most persistent regressor spreads to correlated regressors. Thus, the risk of uncovering spurious results increases as more regressors are included. Inference drawn from other test statistics such as the joint F test, the R-squared, and the Durbin-Watson is also misleading. Finite sample evidence supports our findings.

El artículo publicado puede consultarse en:

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