



Aggregation in regression and commercial property price indices

Mick Silver*

International Monetary Fund, Washington DC, US – msilver@imf.org

Brian Graf

International Monetary Fund, Washington DC, US – msilver@imf.org

This paper addresses problems of aggregation of price changes within regression frameworks. Transaction-price commercial property price indexes (CPPIs) have inherent problems of sparse data on heterogeneous properties for which regression frameworks are typically used. We address the problem of sparse data, demonstrate the need to include spatial price spillovers to remove bias, and propose an innovative approach to effectively weight regional CPPIs along with improvements to higher-level weighting systems. The study uses spatial panel regressions on granular CPPIs for the United States (US).

Keywords: Spatial Econometrics; Spatial Panel Regressions; Errors in Measurement; Index Number Weights.