Testing for localization using micro-geographic data: A new perspective

Yasusada Murata^{*} Ryo Nakajima[†] Ryuichi Tamura[‡]

Abstract

We develop a novel distance-based test of localization by combining the key ingredients of the existing literature. The local linear regression method after binning the data yields a local linear density estimator that has a desirable boundary property. Using the NBER U.S. Patent Citations Data File, we illustrate the performance of our localization measure based on local linear density estimators. Our results suggest that the existing distance-based tests can be substantially biased.

^{*}Advanced Research Institute for the Sciences and Humanities, Nihon University, E-mail address: murata.yasusada@nihon-u.ac.jp

[†]Department of Economics, Keio University, E-mail address: nakajima@econ.keio.ac.jp

[‡]Institute of Innovation Research, Hitotsubashi University, E-mail address: ryuichi.tamura@iir.hit-u.ac.jp