

Nonparametric Spatial Threshold and Two-Dimensional Sample Splitting

Preliminary, Please Do Not Circulate

YOONSEOK LEE*
Syracuse University

YULONG WANG†
Syracuse University

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Abstract

This paper studies a threshold regression model, where the threshold is determined by an unknown relation between two variables. The novel features of this model are in that the threshold is determined by two variables and their relation is nonparametric. Furthermore, we allow the observations to be cross-sectionally dependent and hence the model can be applied to study thresholds over a random field. Empirical relevance is illustrated by estimating an economic border induced by the housing price difference between Queens and Brooklyn in New York City. Such economic border deviates substantially from the administrative one.

Keywords: threshold, spatial, nonparametric, random field.

JEL Classifications: C12, C14, C21, C24.

**Address:* Department of Economics and Center for Policy Research, Syracuse University, 426 Eggers Hall, Syracuse, NY 13244. *E-mail:* ylee41@maxwell.syr.edu

†*Address:* Department of Economics and Center for Policy Research, Syracuse University, 127 Eggers Hall, Syracuse, NY 13244. *E-mail:* ywang402@maxwell.syr.edu