**Estimation and testing of nonparametric panel data models: Applications for worldwide production function**

Many researchers use parametric panel data models which might be misspecified even there is little prior knowledge on functional forms of relationships between variables. Estimators used for misspecified panel data models will be inconsistent and so, lead to invalid statistical inferences related to estimates. In particular, in the last 15 years, the growing popularity of these approaches might be related to the determination of functional form as flexible. In this study, we estimate the worldwide production function with various nonparametric estimators considered within the text. As well as applying various estimators, we also focus on bandwidth selection method, bootstrap methods to calculate standard errors, estimation, and testing procedure in nonparametric panel data models.