

SEOLAH KIM

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EDUCATION

Ph.D. Candidate, Economics, University of California, Riverside	2015-Present
M.A., Economics, Seoul National University, Seoul, South Korea	2012-2014
B.A., English Literature and Language; Economics, Korea University, Seoul, South Korea	2008-2012

RESEARCH INTERESTS

Econometrics, Nonparametric Hypothesis Testing, Applied Econometrics, Labor Economics

WORKING PAPERS

“A Consistent Nonparametric Test for Endogeneity” **Job Market Paper**

I construct a consistent nonparametric test for endogeneity using a triangular simultaneous equations model. In such a setting, I take the control function approach to obtain the conditional moment of interest $E[U|V]$, where U is the error term of the structural equation and V is the error term from the reduced-form equation. This conversion opens a new way of constructing a test because it significantly reduces the dimension when estimating the conditional moment. In constructing a test, I use nonparametric residuals to obtain the consistency of the test. My test has strengths in that it is easy to implement as its asymptotic distribution is the standard normal and it can capture the locally nonlinear correlation with kernel weighting. Also, a wild bootstrap test is proposed to improve the finite sample performance. Using the data from Autor, Dorn, and Hanson (2013), I test if the Chinese import exposure is endogenous with the US local employment. I find a contradicting result between the Hausman test and the nonparametric tests.

“Systematic Development of Nonparametric Testing for Linearity: Small and Large Sample Properties”

I examine the analytical relationship among existing nonparametric test statistics for the linearity test. I present which nonparametric test is locally most powerful, which can be useful for empirical researchers in conducting a test for model specification. Among many different nonparametric hypothesis tests, I focus on Li-Wang type conditional moment test, F type test, Su-Ullah type goodness-of-fit test, and Yao-Ullah type goodness-of-fit test. By imposing some conditions, I can compare the local power of each test asymptotically. In addition, I find that the inequality between test statistics becomes different depending on the estimation method used.

“Per-Cluster Instrumental Variables Estimation: Uncovering the Price Elasticity of the Demand for Gasoline” (with Michael Bates), *Under Review*

We propose a per-cluster instrumental variables estimator (PCIV) for estimating population average effects under correlated random coefficient models in the presence of endogeneity. We demonstrate consistency, showing robustness over standard estimators, and provide analytic standard errors for robust inference. We also apply the approaches, examining the monthly responsiveness of gasoline consumption to prices as instrumented by state fuel taxes. We find that US consumers are on average more elastic in their demand for gasoline than previous estimates imply.

“A Nonparametric Rao-Score Test for the Model Specification”

Among the specification tests, the Rao-Score test is known to be locally most powerful in a parametric context. While a nonparametric test is superior over parametric tests due to its consistency, the Rao-Score test has not been developed yet in a fully nonparametric context. Using the local log-likelihood functions, I can develop a fully nonparametric Rao-Score test. Furthermore, I show that this nonparametric Rao-score test is equivalent to nR^2 , where R^2 is a nonparametric goodness-of-fit proposed in Su and Ullah (2013).

WORK IN PROGRESS

“Random Effect or Fixed Effect? A Consistent Nonparametric Test for Endogeneity in Panel Data”

“Do Children Increase the Likelihood of Homeownership? Evidence from a Sample of Twins” (with Hanbyul Ryu)

PRE-DOCTORAL PUBLICATION

"Effects of Government's Regulations on Private Education Expenditures in Korea." *Seoul Journal of Economics* 29 (2016): 181-211.

AWARDS AND HONORS

<i>Dissertation Year Program Fellowship</i> , University of California, Riverside	2019-2020
<i>Dean's Distinguished Fellowship</i> , University of California, Riverside	2015-Present
<i>Outstanding Teaching Assistant Award</i> , University of California, Riverside	2018-2019
Graduate Student Travel Grant, Graduate Student Association, University of California, Riverside	2018, 2019
Travel Grant, Department of Economics, University of California, Riverside	2018, 2019
Brain Korea 21 Plus (BK21+) RA Scholarship, Korea Research Foundation, South Korea	2013-2014
Brain Korea 21 (BK21) RA Scholarship, Korea Research Foundation, South Korea	2012-2013

SEMINARS AND CONFERENCE PRESENTATIONS [Including Scheduled]

2019: Econometrics Colloquium, University of California, Riverside; Joint Statistical Meetings 2019, Denver, Colorado; Econ-GSA Brown Bag Seminar, University of California, Riverside; California Econometrics Conference 2019 (Poster), Davis, California.

2018: Econ-GSA Brown Bag Seminar, University of California, Riverside; Midwest Econometrics Group 2018, Madison, Wisconsin; Applied Brown Bag Seminar, University of California, Riverside.

2017: Econ-GSA Brown Bag Seminar, University of California, Riverside.

RESEARCH EXPERIENCE

Research Assistant to Professor Aman Ullah <i>Data Collection and Replication of Papers in Nonparametric Literature</i>	Summer 2019
Research Assistant to Professor Michael Bates <i>Data Collection in US Meat Industry and Research on Potential Trade Shocks</i>	Summer 2017

TEACHING EXPERIENCE

Instructor - University of California, Riverside

Intermediate Microeconomic Theory

Summer B 2019

Teaching Assistant - University of California, Riverside

Graduate:

Econometric Methods II

Winter 2019

Undergraduate:

Statistics for Economics

Winter 2017, Winter 2018, Summer A 2018

Introductory Econometrics I

Summer B 2018

Introductory Econometrics II

Spring 2018

Intermediate Microeconomic Theory

Fall 2016, Fall 2017, Fall 2018, Spring 2019

Introduction to Macroeconomics

Spring 2017, Summer A 2017, Fall 2019

PROFESSIONAL SERVICE

Referee for *Journal of Quantitative Economics*, *Econometric Reviews*

Session Chair for Midwest Econometrics Group 2018, Madison, Wisconsin

UNIVERSITY SERVICE

Graduate Student Mentor for Economics Honor Society, University of California, Riverside

2018

Organizer, Econ-Graduate Student Association (Econ-GSA) Brown Bag Seminar

Spring 2019-Present

SKILLS AND PERSONAL

Computer Applications: Matlab, R, Stata, Scientific Workplace, \LaTeX

Languages: English (fluent), Korean (native), French (basic)

Citizenship: South Korea, F-1 Visa

REFERENCES

Professor Aman Ullah (Chair)

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Professor Michael Bates

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