Shahnaz Parsaeian

CONTACT INFORMATION

Department of Economics
University of California, Riverside
900 University Avenue
Riverside, CA 92521, USA

Phone: +1 (951) 425-3177
Email: shahnaz.parsaeian@email.ucr.edu
Website: https://sites.google.com/view/shahnazparsaeian

EDUCATION

Ph.D. in Economics, University of California, Riverside	June 2020 (Expected)
M.A. in Economics, University of California, Riverside	2016
M.S. in Socio-Economic System Engineering, Sharif University of Technology, Tehran, Iran	2013
B.S. in Computer Engineering (Software), Tabarestan University, Mazandaran, Iran	2010

RESEARCH INTERESTS

Econometrics, Applied Econometrics, Empirical Macroeconomics, Financial Econometrics, Big Data

WORKING PAPERS

1. "Optimal Forecast under Structural Breaks with Application to Equity Premium" [Job Market Paper]
2. "Efficient Estimation under Model Instabilities with Application to Big Macroeconomic Data"
3. "Forecasting Panel Data Models in the Presence of Structural Breaks"

TEACHING EXPERIENCE

Instructor, University of California, Riverside

Undergraduate Courses:

Econ 105B, Intermediate Macroeconomic Theory	Summer 2019
Econ 135, The Stock Market	Summer 2019
Econ 135, The Stock Market	Summer 2018
Econ 178, International Trade	Summer 2017

Teaching Assistant, University of California, Riverside

Ph.D. Course:

Econ 205C, Econometrics Method III	Spring 2019

Undergraduate Courses:

Econ 101, Statistics for Economics	Winter 2019
Econ 002, Introduction to Macroeconomics	Spring 2017, Fall 2017, Summer 2018
Econ 104A, Intermediate Microeconomics	Fall 2016, Winter 2018
Econ 003, Introduction to Microeconomics	Spring 2018, Fall 2018
Econ 107, Introductory Econometrics	Winter 2017
Econ 105A, Intermediate Macroeconomics	Summer 2016

CONFERENCE AND SEMINAR PRESENTATIONS

Econometrics Colloquium, University of California, Riverside (Scheduled)	Jan 2020
Midwest Econometrics Group Meeting, The Ohio State University	Oct 2019
Brown Bag Econometrics Seminar, University of California, Riverside	Oct 2019
Joint Statistical Meetings (JSM), Denver, Colorado	July 2019
APPAM California Regional Student Conference, University of California, Irvine	April 2019
Econometrics Colloquium, University of California, Riverside	Feb 2019

AWARDS AND HONORS

Graduate Student Travel Grant, Department of Economics, UC Riverside	2019
Graduate Student Travel Grant, Graduate Student Association, UC Riverside	2019
Non-Residential Tuition Awards, University of California, Riverside	2016-2017
Teaching Assistantship, University of California, Riverside	2016-Present
Dean's Distinguished Fellowship, University of California, Riverside	2015-Present
Full M.S. Fellowship, Sharif University of Technology, Tehran, Iran	2011-2013
Ranked top 0.1% in Iran's nationwide graduate entrance examination	2011
Full B.S. Fellowship, Tabarestan University, Mazandaran, Iran	2006-2010
Ranked top 0.1% in Iran's nationwide undergraduate entrance examination	2006

WORK EXPERIENCE

Planner and Control Project, Dor Riz Engineering Company, Tehran, Iran	2010-2013

JOURNAL REFREE

Journal of Quantitative Economics

SKILLS

Software: Matlab, STATA, R, Eviews, Microsoft Office, LaTeX
Languages: Persian (Native), English (Fluent)

REFERENCES

Aman Ullah (Co-chair)
Distinguished Professor of Economics
University of California, Riverside
Tel: +1 (951) 827-1591
Email: aman.ullah@ucr.edu

Tae-Hwy Lee (Co-chair)
Professor of Economics
University of California, Riverside
Tel: +1 (951) 827-1509
Email: tae.lee@ucr.edu

Bree Lang
Associate Professor of Teaching
University of California, Riverside
Tel: +1 (951) 827-1469
Email: bree.lang@ucr.edu

Joab N. Corey
Associate Professor of Teaching
University of California, Riverside
Tel: +1 (951) 827-1570
Email: joab.corey@ucr.edu

ABSTRACTS FOR WORKING PAPERS

"**Optimal Forecast under Structural Breaks with Application to Equity Premium**" **[JMP]**

This paper develops an optimal combined estimator to forecast out-of-sample under structural breaks. When it comes to forecasting, using only the post-break observations after the most recent break point may not be optimal, especially when there are not enough observations in the post-break sample. In this paper we propose several estimation methods that exploit the pre-break information. In particular, we show how to combine the estimator using the full-sample (i.e., both the pre-break and post-break data) and the estimator using only the post-break sample. The full-sample estimator is inconsistent when there is a break while it is efficient when there is no break. The post-break estimator is consistent when there is a break while it is less efficient when there is no break. Hence, depending on the severity of the breaks, the full-sample estimator and the post-break estimator can be combined to balance the consistency and efficiency. We derive several Stein-like combined estimators of the full-sample estimator and the post-break estimator, to balance the bias-variance trade-off. The combination weight depends on the break severity, which we measure by a Hausman statistic. We derive the optimal combining weight by minimizing the mean square forecast error. We also introduce a semi-parametric estimator which facilitates the idea without having to compute the Hausman statistic in combining full-sample information and post-break sample information. We examine the properties of the proposed methods, analytically in theory, numerically by simulation, and also empirically in predicting the equity premium.

"**Efficient Estimation under Model Instabilities with Application to Big Macroeconomic Data**"

This paper focuses on estimation of the coefficient parameters under multiple structural breaks. We propose a shrinkage estimator of restricted estimator under the restriction that there is no break in the coefficients, with an unrestricted estimator. The unrestricted estimator is derived by estimating the coefficients within each regime separately by using the data on those specific regimes. The combination weight takes the form of James-Stien (1961) weight which is proportional to the Wald statistic test. We derive the exact finite sample risk and find the optimal combined weight by minimizing the risk. We prove that the risk of the shrinkage estimator is lower than the unrestricted estimator, in which the unrestricted estimator is the common solution for estimating the coefficients under structural breaks. We also obtain the dominance condition of the shrinkage estimator over the unrestricted estimator in terms of their mean square forecast errors. We compare the performance of our proposed Stein-like shrinkage estimator with the combined estimator with weight $\gamma \in [0\ 1]$ and find that Stein-type weight outperforms the γ weight. Our methodology is demonstrated in simulations and in an empirical application to the large macroeconomic and financial time series database.

"**Forecasting Panel Data Models in the Presence of Structural Breaks**"

This paper proposes a weighted average estimator for estimating the slope parameters in panel data regression models, which then can be used for forecasting under multiple structural breaks. We assume homogeneity of the coefficients across individual units, allowing the timing of the breaks to be non-common. That is, each unit is allowed to have breaks at any time, not necessarily the same for all units. Our proposed method is the weighted average of the two estimators. One is the pooling estimator in which it is pooled across all individuals and time. The other is the estimator after the most recent break point for each individual unit. We derive the optimal averaging weight by minimizing the mean square forecast error, and show that the proposed estimator performs better than post-break individual estimators in the sense of mean square forecast error.