

## CURRICULUM VITAE

November 8, 2023

NAME: Robin C. Sickles

POSITION: Reginald Henry Hargrove Chair of Economics Emeritus  
Professor of Statistics Emeritus

ADDRESS: Department of Economics  
Rice University  
6100 South Main Street  
Houston, Texas 77005-1892  
(713) 348-3322 (Direct)  
(713) 348-4875 (Department)  
(713) 348-5278 (Fax)  
[rsickles@rice.edu](mailto:rsickles@rice.edu)  
<http://rsickles.rice.edu/>  
[https://en.wikipedia.org/wiki/Robin\\_Sickles](https://en.wikipedia.org/wiki/Robin_Sickles)

EDUCATION: Ph.D. (Economics), University of North Carolina, Chapel Hill, 1976  
B.S. (Economics), Georgia Institute of Technology, 1972.

DISSERTATION TITLE:

"The Estimation of Single and Simultaneous Equation Models  
Containing Truncated Endogenous Variables."  
(Dissertation Chairman: Peter Schmidt)

GOOGLE SCHOLAR SUMMARY STATISTICS (11/8/23):

	<u>All</u>	<u>Since 2018</u>
Citations	12761	3492
h-index	51	28
i10-index	121	65

ACADEMIC/PROFESSIONAL EXPERIENCE:

2023 Visiting Faculty, Florida Atlantic University  
2023 Visiting Researcher, Oviedo Efficiency Group/University of  
Oviedo/Universidad Autónoma de Madrid (UAM)  
2022 Visiting Faculty, Florida Atlantic University  
2021- Fellow, International Association of Applied Econometrics (IAAE)  
2021- Emeritus Professor, Rice University  
2020- Founding President of the International Society for Efficiency and

Productivity Analysis (ISEaPA)

2019- Member, Conference on Research in Income and Wealth (CRIW), National Bureau of Economic Research (NBER)

2016 Visiting Scholar, ETH Zurich/KOF Swiss Economic Institute (March)

2014 Visiting Scholar, University of Melbourne/Department of Economics (November)

2014 Visiting Scholar, School of Economics/Center for Efficiency and Productivity Analysis (CEPA), University of Queensland (July-October)

2013- Research Associate of the Oviedo (Spain) Efficiency Group (OEG)

2013- Member of the International Finance and Banking Society (IFABS) Executive Committee

2012-2018 Visiting Professor of Production Econometrics, University of Loughborough School of Business and Economics

2011-2012 Director of Graduate Studies, Rice University Department of Economics

2010 Visiting Fellow, Hausdorff Research Institute for Mathematics, University Bonn, Germany

2008- Reginald Henry Hargrove Chair in Economics

2008-2012 Director, Accumyn, LLC

2005 Visiting Fellow, Institut de Statistique, Universite Catholique de Louvain

2003- Editor-in-Chief, *Journal of Productivity Analysis*

2002-2007 Director, LECG, LLC

2000-2005 Director of Graduate Studies, Rice University Department of Economics

1999-2002 Director, Center for Institutions and Values, Rice University

1999 Visiting Professor of Pure and Applied Mathematics, Institut de Statistique, Universite Catholique de Louvain

1997 Visiting Fellow, Wissenschaftszentrum Berlin (WZB)

1995 Visiting Fellow, Institut de Statistique, Universite Catholique de Louvain

1995 Visiting Fellow, Wissenschaftszentrum Berlin (WZB)

1994- Adjunct Professor of Medicine, Baylor College of Medicine

1993 Visiting Fellow, Institut de Statistique, Universite Catholique de Louvain

1993 Visiting Scholar, Board of Governors of the Federal Reserve System, Washington, D.C.

1993- President, Analytic Resources, Inc.

1992-1993 Adjunct Visiting Professor, European Institute of Business Administration (INSEAD)

1992 Visiting Scholar, University of Michigan

1992 Visiting Fellow, C.O.R.E., Universite Catholique de Louvain

1989-1995 Research Fellow of the C.V. Starr Center for Applied Economics, New York University

1987-2021 Professor, Department of Economics, Rice University

1985-1987 Associate Professor, Department of Economics, Rice University

1982-1994	Faculty Research Fellow, National Bureau of Economic Research (Productivity and R&D; Health Economics)
1980-1985	Assistant Professor, Department of Economics, University of Pennsylvania
1979-1985	Adjunct Faculty, Fels School of Public and Urban Policy, University of Pennsylvania
1979-1980	Visiting Lecturer, Department of Economics, University of Pennsylvania
1979	Visiting Assistant Professor, Department of Economics, University of North Carolina, Chapel Hill
1976-1979	Assistant Professor, Department of Economics, George Washington University
1976	Consultant, Research Triangle Park, Durham, North Carolina
1972-1976	Research Assistant and Teaching Assistant, Department of Economics, University of North Carolina, Chapel Hill
1971-1972	Grader, Teaching Assistant, Department of Economics, Georgia Institute of Technology
1967-1970	Co-op Student-Martin Marietta Corporation, Quality Control/Antiballistic Missile System Section

#### RICE UNIVERSITY/PROFESSIONAL SERVICE AND AWARDS

Search Committee for the Rice University Dean of Social Sciences, 1987; University Research Computing Planning Committee, 1990; Economics Department Graduate Placement Officer, 1985-; Baker College Faculty Associate, 1995-; Fellow of the *Handbook in Economics*, North-Holland, 1996; Winner of the Rice University Graduate Student Association Mentoring Award, 1998; Nobel Prize for Economic Sciences Nominating Committee 1999-2002; Chair of the Rice University Athletic Committee, 1999-2005; Rice University Environmental Steering Committee, 1999-2002; Winner of the Rice University Outstanding Faculty Associate of Baker College, 2002; Member of the Provost's Graduate Fellowship Committee 2002-2012; *Who's Who in Economics*, 4th edition, by Blaug and Vane, Edward Elgar (2003). *Journal of Econometrics* All Star Papers for 1989-1999 ("Production Frontiers With Cross-Sectional And Time-Series Variation In Efficiency Levels," with C. Cornwell, and P. Schmidt); *Marquis Who's Who in America*; *Academic Keys Who's Who in Social Sciences Higher Education*; *Marquis Who's Who in the World*; Fellow of the *Journal of Econometrics*; Rice University Committee on Examinations and Standings 2004-2005; Rice University Committee on Tenure and Promotions 2005-2006; Treasurer (elected position by the membership of the ASA) of the Business and Economics Section of the American Statistical Association, 2007-2008; top 100 econometricians in the world ranked by the number of all econometric articles, 1989-2005 in *WORLDWIDE ECONOMETRICS RANKINGS: 1989-2005* (Badi H. Baltagi, *Econometric Theory*, 2008); Winner of the Rice University Outstanding Faculty Associate of Baker College, 2008; Rice University Athletic Committee 2008-; Faculty Senator for the School of Social Sciences 2009-; Executive Committee of the Faculty Senate 2010-; Faculty Senate liaison to the Rice University Athletic Committee, 2010-2012; Nobel Prize for Economic Sciences Nominating Committee 2010-; Director of Graduate Studies-Department of Economics 2011-2012; Outstanding Faculty Associate of Baker College, 2014; Rice University Athletics Committee 2014-; Rice University Committee on

Undergraduate Curriculum (CUC) 2014-2017; School of Social Sciences Faculty Advisory Committee 2014- ; Rice University Graduate Council 2017-. Rice University Women's Athletic Advisory Board (WAAB) 2018-; Winner of the Ralph O'Connor Award for Distinction in Teaching and Research in Economics, Rice University, 2019; Center for Computational Finance and Economic Systems (CoFES) Eubank Computational Statistics Award, 2021; Fellow of the International Association of Applied Econometrics, 2021.

#### EDITORIAL EXPERIENCE:

##### EDITOR-IN-CHIEF:

*Journal of Productivity Analysis*, 2002-2012.

##### ASSOCIATE EDITOR/EDITORIAL BOARD MEMBER:

*Journal of Applied Econometrics*, 1988-1992.

*Journal of Productivity Analysis*, 1988-2002.

*Communications in Statistics, Theory and Methods*, Marcel Dekker, 1995-2007.

*Southern Economic Journal*, 1996-1999.

*Journal of Business and Economic Statistics*, 1998-2007.

*Journal of Econometrics*, 2000-2019

*Empirical Economics*, 2000-2019

*Journal of Chinese Economic and Business Studies*, 2014-

#### REFEREE

I serve as a referee for a large number of professional journals and publishers.

#### CURRENT RESEARCH:

Applied Econometrics; Productivity; Empirical Industrial Organization; Panel Data Econometrics.

#### TEACHING EXPERIENCE:

Advanced Econometric Theory; Advanced Topics in Micro-Econometrics; Applied Econometrics for Energy Markets; Honors Program in Economics; Econometrics of Production; Advanced Mathematical Statistics; Undergraduate Statistics, Econometrics, Micro and Macroeconomics; Managerial Economics.

#### RESEARCH GRANTS AND CONTRACTS:

Investigator, National Science Foundation Grant DAR 78-09873, "The Effects of Government Regulation on Consumer Credit Markets," with J. Barth, J. Cordes, S. Neftci, and A. Yezer, 1978.

Investigator, National Science Foundation Grant SES 99-26717, "Estimating Technical and Allocative Inefficiency Relative to Stochastic Transformation and Profit Frontiers," with C.A.K. Lovell and P. Schmidt, 1980.

Principal Investigator, National Science Foundation Grant DAR 80-12982, "Estimation of Specific Factor Productivity and Efficiency for the U.S. Airlines: 1968-1979," 1980.

Research Associate, National Bureau of Economic Research Grant No. 2630, "Socioeconomic Aspects of Mortality," with P. Taubman, 1982.

Co-Principal Investigator, National Science Foundation Grant SES 84-09047, "Specification and Estimation of Multiproduct Technologies: An Application to Indian Agriculture," with J.R. Behrman, C.A.K. Lovell, and R.A. Pollak, 1984.

Investigator, National Institutes of Health Grant 1-RO1-AG-05384-01, "Medicare and Shifts in Survivor Functions for the Aged," with J. Behrman and P. Taubman, 1986.

Investigator, Veterans Administration Health Services Research and Development Field Program, with N. Wray, C. Ashton, et al., 1990.

Consultant, Logistics Management Institute and National Aeronautics and Space Administration Contract # NAS2-14361, "System Analysis Capability (ASAC) Air Carrier Investment Model," with D. Good, 1993-1997.

Investigator, Center for International Political Economy and the James A. Baker III Institute for Public Policy, "Dynamic Modeling of Optimal Production Decisions In the Middle East," with P. Hartley, 1996.

Investigator, Center for International Political Economy and the James A. Baker III Institute for Public Policy, "Dynamic Modeling of Optimal Production Decisions and Demand Conditions in Central Asia and the Caucasus," 1997.

Investigator, Center for International Political Economy and the James A. Baker III Institute for Public Policy, "Accounting for Environmental Factors in the Development Process: Implications for Chinese Growth and Composition of Energy Needs in the 21<sup>st</sup> Century," 1998.

Investigator, Center for International Political Economy and the James A. Baker III Institute for Public Policy, "Uncertainty and the Role of Seismic Calamities in Japanese Nuclear Power Production," 1999.

Senior Research Coordinator, Development Economic Policy Reform Analysis Project, USAID/Egyptian Ministry of Economy, Contract No. 263-0233-C-00-96-00001-00.

Investigator, U. S. Department of Labor, Bureau of Labor Statistics, "On an Integrated Treatment of Airline Transportation Quality: Implications for Measurement of the Consumer Price Index," 1999.

Investigator, James A. Baker III Institute for Public Policy, "Convergence, Regulatory Distortions, Deregulatory Dynamics and The Recent Growth Experiences of Economies in Brazil and Latin America: Hope for the Future?," 2001.

Investigator, James A. Baker III Institute for Public Policy, "A Study of Productivity and Efficiency in the Mexican Energy Industry: The Case of PEMEX," 2004.

Investigator, U. S. Department of Labor, Bureau of Labor Statistics, "A Comparison of Alternative Measurements of Depreciation for Commercial Aircraft," 2004.

### CONFERENCES ORGANIZED

Texas Camp Econometrics II, February 1997, Port Royal Ocean Resort Mustang Island, Port Aransas, TX.

Texas Camp Econometrics VI, February 2002, Port Royal Ocean Resort Mustang Island, Port Aransas, TX.  
<http://www.ruf.rice.edu/~tec/>

April 22-23, 2006 Conference on "The Use of Econometrics in Informing Public Policy Makers," co-sponsored by the Baker Institute. The conference hosted 24 leading scholars and included 16 presentations of papers under consideration for a *Special Annals Issue of the Journal of Econometrics*, edited by Robin Sickles and Jennifer Williams.  
<http://cohesion.rice.edu/conferences/econometrics/>

Texas Camp Econometrics XI, February 2007, South Shore Harbour, Texas.

North American Productivity Workshop VI, 2010, June 2-5, Rice University.  
<http://economics.rice.edu/~napw2010/>.

Conference in Honor of Peter Schmidt, June-July 2011, South Shore Harbour, Texas.  
<http://economics.rice.edu/Content.aspx?id=686>.

Texas Econometrics Camp XVI, February 2012, South Shore Harbour Conference, Texas.  
<http://economics.rice.edu/Content.aspx?id=899>.

North American Productivity Workshop VII, 2012, June 6-9, Rice University.  
<http://economics.rice.edu/~napw2012/>.

European Workshop on Efficiency and Productivity Analysis XV, 12 - 15 June 2017, London, UK. <http://www.ewepa.org/>

European Workshop on Efficiency and Productivity Analysis XVI, 10 - 13 June 2019, London, UK. <http://www.ewepa.org/>

NSF/Time Series Conference, Rice University, October 15-16, 2021. <http://nber-nsf2021.rice.edu/>

African Productivity Conference, virtual, December 16-18, 2021. [https://iseapa.org/virtual\\_apw](https://iseapa.org/virtual_apw)

Productivity Conference of the Americas (PCA), April 19-21, 2023, Montevideo, Uruguay, concurrent with 6to Congreso Regional de Economía Agraria and the IAAE-Inter-Conference Symposium Meeting.

African Productivity Conference, virtual, December 14-16, 2023. <https://iseapa.org/event/view/39>

#### SCIENTIFIC COMMITTEES:

International Panel Data Conference (2009-

European Workshop on Efficiency and Productivity Analysis (2002-

Asian Pacific Productivity Workshop (2002-

North American Productivity Workshop (2002-2019)

DEA Conference (2008-

The EURO Working Group on Efficiency and Productivity Analysis (EWG-EPA) (2010-

International Association of Applied Econometrics (2016)

North American Productivity Workshop (2021)

African Productivity Conference (2022-

Productivity Conference of the Americas (2023-

#### REFEREED JOURNAL PUBLICATIONS:

1. "On the Efficiency of the Almon Lag Technique," with P. Schmidt, *International Economic Review* 16, 1975, 792-795.
2. "Some Further Evidence on the Use of the Chow Test Under Heteroskedasticity," with P. Schmidt, *Econometrica* 46, 1977, 1293-1298.

3. "Simultaneous Equations Models With Truncated Dependent Variables: A Simultaneous Tobit Model," with P. Schmidt, *Journal of Economics and Business* 30, 1978, 11-21.
4. "An Application of the Simultaneous Tobit Model: A Study of the Determinants of Criminal Recidivism," with P. Schmidt and A. Witte, *Journal of Economics and Business* 31, 1979, 166-171.
5. "A Random Coefficient Probit Model With an Application to a Study of Migration," with J. Akin and D.K. Guilkey, *Journal of Econometrics* 11, 1979, 233-246.
6. "Assessing the Impact of Varying Economic Conditions on Federal Reserve Behavior," with J. Barth and P. Wiest, *Journal of Macroeconomics* 4, 1982, 47-70.
7. "Testing Efficiency Hypotheses in Joint Production: A Parametric Approach," with C.A.K. Lovell, *Review of Economics and Statistics* 65, 1983, 51-58.
8. "A Comparison of the Performance of Three Flexible Functional Forms," with D.K. Guilkey and C.A.K. Lovell, *International Economic Review* 24, 1983, 591-616.
9. "The Impact of Minimum Wages on the Distributions of Earnings for Major Race-Sex Groups: A Dynamic Analysis," with J. Behrman and P. Taubman, *American Economic Review* 73, 1983, 766-778.
10. "Production and Final Demand Price Determination Within a Singular Equation System of Relative Prices," with S. Thurman, *Journal of Policy Modeling* 5, 1983, 125-148.
11. "Production Frontiers and Panel Data," with P. Schmidt, *Journal of Business and Economic Statistics* 2, 1984, 367-374.
12. "The CES-translog: Specification and Estimation of a New Cost Function," with R. Pollak and T. Wales, *Review of Economics and Statistics* 67, 1984, 602-607.
13. "A Nonlinear Multivariate Error Components Analysis of Technology and Specific Factor Productivity Growth with an Application to the U.S. Airlines," *Journal of Econometrics* 27, 1985, 61-78.
14. "An Analysis of Youth Crime and Employment Patterns," with D. Good and M. Pirog-Good, *Journal of Quantitative Criminology* 2, 1986, 219-235.
15. "An Analysis of the Health and Retirement Status of the Elderly," with P. Taubman, *Econometrica* 54, 1986, 1339-1356.
16. "Allocative Distortions and the Regulatory Transition of the U.S. Airline Industry," with D. Good and R. Johnson, *Journal of Econometrics* 33, 1986, 143-163.
17. "Union Wage, Hours and Earnings Differentials in the Construction Industry," with



- J. Perloff, *Journal of Labor Economics* 5, 1987, 174-210.
18. "The Effect of Unionization on Labor Productivity: Some Additional Evidence," with C.A.K. Lovell and R. Warren, *Journal of Labor Research*, 9, 1988, 55-63.
  19. "Finite Sample Properties of Stochastic Frontier Models Using Panel Data," with Byeong-Ho Gong, *Journal of Productivity Analysis* 1, 1989, 229-261.
  20. "Survivor Functions with Covariates: Sensitivity to Sample Length, Functional Form and Unobserved Frailty," with J. Behrman and P. Taubman, *Demography*, 27, 1990, 267-284.
  21. "Production Frontiers with Cross-Sectional and Time Series Variation in Efficiency Levels," with C. Cornwell and P. Schmidt, *Journal of Econometrics* 46, 1990, 185-200.
  22. "XploR-ing the World of Nonparametric Analysis," with Pin Ng, *Journal of Applied Econometrics, Software Reviews*, 5, 1990.
  23. "A Profile of Illegal Drug Users," with Paul Taubman, *American Economic Review* 81, 1991, 248-251.
  24. "A Comparison Between Stochastic Frontier and Data Envelopment Methods Using Panel Data," with Byeong-Ho Gong, *Journal of Econometrics* 51, 1992, 259-284.
  25. "Black-White Differentials in Mortality: Results from the Retirement History Survey," with J. Behrman, P. Taubman, and A. Yazbeck, *Journal of Econometrics* 50, 1992, 183-204.
  26. "The CET-CES-Generalized Leontief Profit Function: An Application to Indian Agriculture," with J. Behrman, C.A.K. Lovell and R.A. Pollak, *Oxford Economic Papers* 44, 1992, 341-354.
  27. "Technical Inefficiency and Productive Decline in the U.S. Interstate Natural Gas Pipeline Industry Under the U.S. Interstate Natural Gas Policy Act," with M. Streitwieser, *Journal of Productivity Analysis*, special issue edited by A. Lewin and C.A.K. Lovell, 3, 1992, 115-130.
  28. "Efficiency and Productivity Growth Comparisons of European and U.S. Air Carriers: A First Look at the Data," with D. Good, M.I. Nadiri, and Lars-Hendrik Roller, *Journal of Productivity Analysis* 4, special issue edited by J. Mairesse and Z. Griliches, 1993, 115-125.
  29. "U.S. Airline Deregulation: Implications for European Transport," with David H. Good and Lars-Hendrik Roller, *Economic Journal* 103, 1993, 1028-1041.
  30. "Changes in VA Hospital Use Since 1980: Unanswered Question," with C. Ashton, T. Weiss, N. Petersen, N. Wray, and T. Menke, *Medical Care* 32, 1994, 447-458.

31. "Product Diversification, Economies of Scope, and Attitudes Toward Risk In Agricultural Production," with M. Ballivian, *Journal of Productivity Analysis* 5, 1994, 271-286.
32. "Estimation of the Duration Model by Nonparametric Maximum Likelihood, Maximum Penalized Likelihood and Probability Simulators," with K. Huh, *Review of Economics and Statistics* 75, 1994, 683-694.
33. "Airline Efficiency Differences Between Europe and the U.S.: Implications for the Pace of E.C. Integration and Domestic Regulation," with David H. Good and Lars-Hendrik Roller, *European Journal of Operational Research* 80, 1995, 508-518.
34. "Competition and Efficiency in the European Airline Industry: 1976-1990," with P. Captain, *Managerial and Decision Economics*, 18, 1997, 209-225.
35. "The Relationship Between Stock Market Returns and Technical Efficiency Innovations: Evidence from the US Airline Industry," with Ila M. Semenick Alam, *Journal of Productivity Analysis*, 9, 1998, 35-51.
36. "Stochastic Panel Frontiers: A Semiparametric Approach," with Byeong Park and Leopold Simar, *Journal of Econometrics*, 84, 273-301, 1998.
37. "Maximum Penalized Likelihood Estimation of Mixed Proportional Hazard Models," with K. Huh and A. K. Postert, *Communications in Statistics: Theory and Methods*, 27, 1998, 2143-2164.
38. "On the Dynamics of Demand for Leisure and Production of Health: Evidence from the Retirement History Survey," with Abdo S. Yazbeck, *Journal of Business and Economic Statistics*, 1998, 16, 187-197.
39. "The Structure of Technology, Substitution and Productivity in the Interstate Natural Gas Transmission Industry Under the Natural Gas Policy Act of 1978," with M. Streitwieser, *Journal of Applied Econometrics*, 13, 1998, 377-395.
40. "Semiparametric Approaches to Stochastic Panel Frontiers with Applications to the Banking Industry," with Robert M. Adams and Alan Berger, *Journal of Business and Economic Statistics*, 17, 1999, 349-358.
41. "Technology Adoption and Efficiency," with P. Hultberg, and M. Ishaq Nadiri, *Annales d'Economie et de Statistique, Special Issue on the Econometrics of Panel Data*, 55-56, 1999, 449-474.
42. "A Time Series Analysis of Deregulatory Dynamics and Technical Efficiency: The Case of the U. S. Airline Industry," with Ila M. Semenick Alam, *International Economic Review*, 41, 2000, 203-218.
43. "Capacity and Product Market Competition: Measuring Market Power in a 'Puppy-Dog' Industry," with Lars-Hendrik Röller, *International Journal of Industrial Organization*,

- 18, 2000, 845-865.
44. "Estimation of Long-Run Inefficiency Levels: a Dynamic Frontier Approach, with S. Ahn and D. Good, *Econometric Reviews*, 19, 2000, 461-492.
  45. "Time Series Analysis of Strategic Pricing Behavior in the US Airline Industry," with I. Semenick Alam and L. Ross, *Journal of Productivity Analysis*, 16, 2001, 49-62.
  46. "Municipal Water Demand Estimation: Evaluation of the Stone-Geary Form Using Panel Data," with S. Gaudin Hultberg and R. Griffin, *Land Economics*, 77, 2001, 399-422.
  47. "A Model of Optimal Dynamic Extraction from a Large Middle Eastern Field," with P. Hartley, *Journal of Productivity Analysis*, 2001, 15, 59-71.
  48. "An Analysis of the Crime as Work Model: Evidence from the 1958 Philadelphia Birth Cohort Study," with J. Williams, *Journal of Human Resources*, 37 (2002): 479-509.
  49. "Specification of Distance Functions Using Semi-and Nonparametric Methods With An Application to the Dynamic Performance of Eastern and Western European Air Carriers," with L. Getachew and D. Good, *Journal of Productivity Analysis, Special Issue in Honor of W. W. Cooper*, (2002): 133-155.
  50. "Semiparametric Efficient Estimation of Panel Models with AR(1) Errors," with B. Park, and L. Simar, *Journal of Econometrics*, 117, 2003, 279-309.
  51. "Semi-and Nonparametric Measurement of Productivity in Federal Reserve Payment Processing," with R. Adams and P. Bauer, *Journal of Money, Credit, and Banking*, 36, 943-958, 2004.
  52. "Heterogeneous Rates of Catch-Up in Manufacturing Industries," with M. I. Nadiri and P. Hultberg, *Empirical Economics*, 29, 753-768, 2004.
  53. "The Role of Environmental Factors in Growth Accounting," with B. Jeon, *Journal of Applied Econometrics*, 19, 567-591, 2004.
  54. "Panel Estimators and the Identification of Firm-Specific Efficiency Levels in Semi-Parametric and Non-Parametric Settings," *Journal of Econometrics*, 126, 305-324, 2005.
  55. "Semiparametric Efficient Estimation of Dynamic Panel Data Models," with B. Park and L. Simar, *Journal of Econometrics*, 136, 281-301, 2007.
  56. "Allocative Distortions and Technical Efficiency Change in Egypt's Private Sector Manufacturing Industries: 1987-1996," with Lullit Getachew, *Journal of Applied Econometrics*, 22, 703-728, 2007.
  57. "Productivity ? of U . S. Airlines After Deregulation," with S. Grosskopf and R. Fare, the *Journal of Transport Economics and Policy*, 41, 93-112, 2007.

58. "Semi-parametric Efficient Distribution Free Estimation of Panel Models," with Robert Adams, *Communications in Statistics: Theory and Methods*, 36, 2425–2442, 2007.
59. "A Dynamic Model of Airline Competition," with Ying Fang, *Review of Network Economics*, 6, 355-371, 2007.
60. "Turning from crime: A dynamic perspective," with J. Williams, *Journal of Econometrics*, 145,158-173, 2008.
61. "A Hedonic Price Index for Airline Travel," with D. Good and J. Weiher, *Review of Income and Wealth*, 54, 438-465, 2008.
62. "Introduction to the Special Issue of the Journal of Econometrics on The Use of Econometrics to Inform Public Policy Makers," with Jenny Williams, *Journal of Econometrics*, 145, 1-3, 2008.
63. "Optimal Dynamic Production Policy: The Case of a Large Oil Field in Saudi Arabia," with W. Gao and P. Hartley, *Empirical Economics*, 37, 153–184, 2009.
64. "An Analysis of Strategic Behavior and Consumer Surplus in eBay Auctions," with K. Hasker and R. Gonzalez, Special Issue on the Econometric Analysis of Panel Data (edited by Jan Kiviet), *Singapore Economic Review*, 54, 441-472, 2009.
65. "Krugman and Young Revisited: A Survey of Sources of Productivity Growth in a World with Less Constraints," with Burcu Cigerli, *Seoul Journal of Economics*, 22, 29-54, 2009.
66. "eBay in the Economic Literature: Analysis of an Auction Marketplace," with Kevin Hasker, *Review of Industrial Organization*, 37, August, 3-42, 2010.
67. "In memoriam: John W. Kendrick," with C. A. K. Lovell, *Journal of Productivity Analysis*, 34, 1-2, 2010.
68. "Knowledge and Geographical Spillovers in Wartime Shipbuilding," with David Blazek, *Economic Modeling*, in honor of P.A.V.B. Swamy, L. R. Klein, G. S. Tavlás, and A. Zellner (eds.), Vol. 27, November, 1484-1497, 2010.
69. "A Multi-product Cost Function for Physician Private Practices," with Tim Gunning, *Journal of Productivity Analysis*, 35, 19-38, 2011.
70. "A New Panel Data Treatment for Heterogeneity in Time Trends," with A. Kneip and W.H. Song, *Econometric Theory*, 28, 590-628, 2012.
71. "Health, Mental Health and Labor Productivity: The Role of Self-Reporting Bias," with Justin Leroux and John Rizzo, *Empirical Economics*, 43, 525-536, 2012.

72. "Estimation of Market Power in the Presence of Firm Level Inefficiencies," with Levent Kutlu, *Journal of Econometrics*, 168, 141-155, 2012.
73. "Introduction to the Special Annals Issue of the Journal of Econometrics: The Econometrics of Auctions and Games," with Subal Kumbhakar, *Journal of Econometrics*, 168, 1-3, 2012.
74. "Competition and Market Power in Physician Private Practices," with Timothy Gunning, *Empirical Economics*, 44, 1005-1029, 2013.
75. "How Efficiently Do U.S. Cities Manage Roadway Congestion?," with Anthony J. Glass and Karligash Kenjegalieva and Sickles. R. C., Special Issue of the Journal of Productivity Analysis in Honor of C. A. K. Lovell, Jesús T. Pastor Ciurana (Guest Editor), Luis Orea and Dr. Juan Aparicio (Guest Associate Editors), *Journal of Productivity Analysis*, 40, 407-428, 2013.
76. "Estimating Efficiency Spillovers with State Level Evidence for Manufacturing in the U.S.," with Anthony Glass and Karligash Glass, *Economics Letters*, 123, 154-159, 2014.
77. "Panel Data and Productivity Measurement: An Analysis of Asian Productivity Trends," with Jiaqi Hao and Chenjun Shang, *Journal of Chinese Economic and Business Studies*, 12:3, 211-231, 2014.
78. "Semi-nonparametric Spline Modifications to the Cornwell-Schmidt-Sickles Estimator: An Analysis of U. S. Banking Productivity" with P. Almanidis and G. Karagiannis, *Empirical Economics*, 48, 169–191, 2015.
79. "The effects of efficiency and TFP growth on pollution in Europe: a multistage spatial analysis," with Morakinyo Adetutu, Anthony J. Glass, Karligash Kenjegalieva, *Journal of Productivity Analysis*, 43:307–326, 2015.
80. "How Regulatory Capital Requirement Affects Banks' Productivity: An Application on Emerging Economies Banks," with Meryem Duygun, Mohamed Shaban, and Thomas Weyman-Jones, *Journal of Productivity Analysis* 44, 237-248, 2015.
81. "Spatial Autoregressive and Spatial Durbin Stochastic Frontier Models for Panel Data," with Anthony Glass and Karligash Kenjegalieva, *Journal of Econometrics* 190, 289-300, 2016.
82. "Returns to Scale and Curvature in the Presence of Spillovers: Evidence from European Countries," with Anthony Glass and Karligash Glass, *Oxford Economic Papers* 68, 2016, 40-63.
83. "Measuring Efficiency: A Kalman Filter Approach," with M. Fethi and L. Kutlu, *Journal of Productivity Analysis*, 46, 155-167, 2016.

84. "ICT Capital, Output Growth and Productivity: An Analysis on Turkish Manufacturing Industry," with Yılmaz Kılıçaslan, Aliye Atay Kayış, and Yeşim Üçdoğruk, *Journal of Productivity Analysis*, 47:3, 277-289, 2017.
85. "Measuring Market Power When Firms Price Discriminate," with Levent Kutlu, *Empirical Economics*, Special Issue in Honor of Kajal Lahiri: Forecasting, use of survey data on expectations, and panel data applications, Badi Baltagi (ed.), Volume 53, Issue 1, 287-305, 2017.
86. "Bayesian Treatments to Stochastic Panel Data Models with an Application to Models of Productivity," with Junrong Liu and E. G. Tsionas, Special Issue of *Econometrics* on Recent Developments in Panel Data Methods, In Choi and Ryo Okui (Guest-Editors), 5:3, 1-21, 2017.
87. "World Productivity Growth: A Model Averaging Approach," with Meryem Duygun, Jiaqi Hao, Anders Isaksson, Special Issue of the *Pacific Economic Review* on Economic Growth, Productivity and Efficiency, Cliff Huang and Tsu-tan Fu (Guest-Editors), 22: 4, 587-619, 2017.
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1. "An Analysis of Time Sentenced After Release From Prison," with P. Schmidt and A. Witte, in *Proceedings of the Criminal Justice Statistics Association*, Minneapolis, Minn., August, 1978.
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## MONOGRAPHS/EDITED VOLUMES

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## SPECIAL JOURNAL ISSUES CO-EDITED OR MANAGING EDITOR

1. *Special Issue of the Journal of Productivity Analysis on Entrepreneurship, Innovation, and Market Dynamics*, with David Audretsch and Christos J. Panzios (eds.), Springer, Volume 25, Numbers 1-2 / April, 1-195, 2006.
2. *Special Symposium in the Journal of Productivity Analysis on Agricultural Productivity in Developing Countries*, (Managing Editor) with Guest-Editor David Schimmelpfennig, Springer, 2007.
3. *Special Annals Issue of the Journal of Econometrics on The Use of Econometrics to Inform Public Policy Makers*, with Jenny Williams (ed.), Volume 145, Issues 1-2, Elsevier/North-Holland: Amsterdam, July 2008.

4. *Special Symposium of the Journal of Productivity Analysis on Productivity in Sports*, (Managing Editor) with Guest Editors H. Fried and R. Simmons, Springer, 2010.
5. *Special Annals Issue of the Journal of Econometrics on The Econometrics of Auctions and Games*, with Subal Kumbhakar (ed.), Volume 168, Issue 1, Elsevier/North-Holland: Amsterdam, May 2012.
6. *Special Symposium of the Journal of Productivity Analysis on Plenary Talks from the North American Productivity Conference 2010*, with Guest Editor C. A. Knox Lovell, Springer, 2012.
7. *Special Issue of the Journal of Productivity Analysis on Empirical and Theoretical Treatments on Goods and Bads in Efficiency and Productivity Measurement* (Managing Editor) with Guest Editors Rolf Färe, Shawna Grosskopf, and Dimitris Margaritis, Springer, 2012.
8. *Special Issue of the Journal of Productivity Analysis in Honor of C. A. Knox Lovell*, (Managing Editor) with Guest Editors Jesus T. Pastor, Juan Aparicio, Luis Orea, Springer, 2013.
9. *Special Symposium of the Journal of Productivity Analysis Selected Papers from the 2010 Conference of the EURO Working Group on Efficiency and Productivity Analysis on Global Trends in the Efficiency and Risk Management of Financial Services* (Managing Editor) with Guest Editors Meryem Duygun Fethi, Fotios Pasiouras, Constantin Zopounidis, Springer, 2013.
10. *Special Issue of the Journal of Productivity Analysis on Selected Papers from the Asian Pacific Productivity Conference 2010* (Managing Editor) with Guest Editors Tsu-Tan Fu, Cliff J. Huang, C. A. Knox Lovell, New York: Springer, 41:2, 173-337, 2014.
11. *Special Symposium of the Journal of Productivity Analysis in Memory of Cathy Morrison-Paul* (Managing Editor) with Guest Editor Lilyan E. Fulginiti, New York: Springer, 41:1, 1-50, 2014.
12. *Special Issue of Econometric Reviews in Honor of Peter Schmidt*, with Esfandiar Maasoumi (eds.), Taylor & Francis, 2016.
13. *Special Issue of Empirical Economics in Honor of Peter Schmidt*, with Subal Kumbhakar and Hung-Jen Wang (eds.), 2023.
14. *Special Symposium on the Lifetime Achievements of Rolf Färe and Shawna Grosskopf*, Journal of Productivity Analysis, forthcoming, DOI 10.1007/s11123-023-00693-0, 2023.
15. *Special Symposium of the Journal of Productivity Analysis on Discrimination, Inequality, and Productivity*, forthcoming, with Christopher Parmeter (eds.), 2023.
16. *Special Issue of the Journal of Productivity Analysis on Productivity and Economic Development in Africa*, forthcoming with Almas Heshmati and Christopher Parmeter (eds.), 2024.

PAPERS SUBMITTED/UNDER REVISION/WORKING PAPERS/BOOK PROJECTS

1. “Estimation of Industry-level Productivity with Cross-sectional Dependence using Spatial Analysis,” with Jaepil Han, Rice University, mimeo, 2020.
2. “Banking Sector Competitiveness in Eurozone Countries: 2004 – 2014”, with Lisa Ling and Mike Tsionas, Rice University, 2021.
3. “The Term Structure of Sovereign CDS and Currency Carry Trades,” with Giovanni Calice, Kerda Varaku, and Ming-Tsung Lin, Rice University, 2021.
4. “Analyzing the causal impact of microfinance regulation with deep neural networks models and spatial learning methods,” with Valentina Hartarska and Kerda Varaku, Rice University, 2021.
5. “Environmental Efficiency in Drinking Water: An Undesirable Outputs Approach,” with Roberto Mosheim,” 2021.
6. *Productivity and Efficiency Analysis in Stata*, monograph, with Oleg Badunenko and Valentin Zelenyuk, 2021.
7. “Productivity and spillovers in US ports: supply chain disruptions and their economic impacts on the US economy,” with Neela Manage, Rice University, 2022.
8. *Special Issue of Journal of Productivity Analysis on Productivity and Economic Development in Africa*, in process, Guest Co-Editor with Almas Heshmati, 2022.
9. “Linguistic distance to English impedes research performance,” with Yihui Cao, Thomas P. Triebs, and Justin Tumlinson, Jan 2023, [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=4365522](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=4365522).
10. “Three-Way Random Effects Stochastic Frontier Model, with Levent Kutlu, Rice University, mimeo, 2023.
11. “Why do firms (not) adopt robotic and digital capital?”, with Luis Orea, María José Pérez-Villadóniga, Ana Rodríguez-Álvarez, University of Oviedo, 2023.
12. “How much of manufacturing labor productivity is explained by territorial characteristics? spatial spillovers across Mexico’s states,” with Jesús Antonio López Cabrera, Miguel Alejandro Flores Segovia, Rice University, 2023.
13. “Beyond Borders: How Spillovers and Commercial Networks Shape European Productivity, with Andre Carrascal-Incera, Weilin Liu, and Luis Orea, University of Oviedo, 2023.
14. “The Wizard of OZ : Optimal Allocation Mechanisms in Place Based Opportunity Zone Programs,” with James Barth Ditya Deepta Mishra, and Yanfei Sun, rice



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SELECTED PRESENTATIONS AT CONFERENCES AND MEETINGS (2000-

1. "Turning from Crime: A Dynamic Perspective," North American Meetings of the Econometric Society, Boston, January, 2000.
2. "Are Airfares Fair?: On a New Hedonic Price Index for Airline Travel," Bureau of Labor Statistics Conference on "Issues in Measuring Price Changes and Consumption," Washington, D. C., June, 2000.
3. "On a New Hedonic Price Index for Airline," The North American Productivity Workshop, June, 2000, Union College, New York.
4. "Semiparametric Efficient Estimation of Panel Models with AR(1) Errors," The Ninth International Conference on Panel Data, June, 2000, University of Geneva; The Eighth World Congress of the Econometric Society, Seattle, August, 2000.
5. "The Role of Environmental Factors in Growth Accounting: a Nonparametric Analysis," North American Meetings of the Econometric Society, New Orleans, January 2001.
6. "On a New Hedonic Price Index for Airline" Brookings Institute Workshop on Transportation Output and Productivity," May, 2001.
7. "Productivity ? of U . S. Airlines After Deregulation, On a New Hedonic Price Index for Airline Travel," International Conference on Productivity and Efficiency, Oviedo, Spain, October, 2001.
8. "Semiparametric Efficient Estimation of Dynamic Panel Data Models," The Tenth International Conference on Panel Data, June 2002, Berlin.
9. "On a New Hedonic Price Index for Airline," The North American Productivity Workshop, June 2002, Union College, New York.
10. "Panel Estimators and the Identification of Firm-Specific Efficiency Levels in Semi-Parametric and Non-Parametric Settings," Conference on Current Developments in Productivity and Efficiency Measurement, October 2002, Athens, Georgia.
11. "Panel Estimators and the Identification of Firm-Specific Efficiency Levels in Semi-Parametric and Non-Parametric Settings," University of Korea, November 2002.
12. "Panel Estimators and the Identification of Firm-Specific Efficiency Levels in Semi-Parametric and Non-Parametric Settings," 2<sup>nd</sup> Hellenic Workshop on Productivity and Efficiency Measurement, May-June, 2003, Patras, Greece; 8<sup>th</sup> International Conference on Productivity and Efficiency, October 2003, Oviedo, Spain.

13. "On Estimating the Mixed Effect Model," North American Productivity Workshop, Toronto, June 2004.
14. "Looking Forward to Your Research," Keynote Address of the Asia-Pacific Productivity Conference," Brisbane, July 2004.
15. "On Estimating the Mixed Effect Model," European Workshop of Efficiency and Productivity IX, Brussels, July 2005.
16. "A New Panel Data Treatment for Heterogeneity in Time Trends," 2005 Econometric Society World Congress, University College, London, August.
17. "Measuring Depreciation for Commercial Aircraft," Conference on the Empirical Foundations for Capital Measurement, Bureau of Labor Statistics, Washington, D.C., September 2005.
18. "Estimating Consumer Surplus in e-Bay Computer Monitor Auctions," FTC Roundtable: Economics of Internet Auctions, Washington, D.C., October 2005.
19. "A New Panel Data Treatment for Heterogeneity in Time Trends," 3<sup>rd</sup> Hellenic Workshop on Productivity and Efficiency Measurement, University of Patras, Greece, June 2006.
20. "Estimating Consumer Surplus in e-Bay Computer Monitor Auctions," North American Productivity Workshop IV, June 2006, New York University.
21. "Estimating Consumer Surplus in e-Bay Computer Monitor Auctions," 13th International Conference on Panel Data, July 2006, University of Cambridge, UK.
22. "Competition and Market Power in Physician Private Practices," Texas Camp Econometrics XI, February 2007, South Shore Harbour, Texas.
23. "Competition and Market Power in Physician Private Practices," New York Camp Econometrics, March 24-25, 2007 Saratoga Springs, NY.
24. "Stochastic Frontiers with Bounded Inefficiency," Tenth European Workshop on Efficiency and Productivity Analysis, June 2007, Lille, France.
25. "Estimating Consumer Surplus in e-Bay Computer Monitor Auctions," Auctions and Games: A Conference for the Journal of Econometrics Annals Issue, VPI, Blacksburg, Va., October 12-13, 2007.
26. "A New Panel Data Treatment for Heterogeneity in Time Trends," Joint Econometrics Seminar, University of Quebec at Montreal, University of Montreal, September 14, 2007.

27. "Stochastic Frontiers with Bounded Inefficiency," Texas Camp Econometrics XIII, Inn of the Hills Resort and Conference Center, Kerrville, Texas, February 16/17, 2008.
28. "The Use of Econometrics in Informing Public Policy Makers," keynote address of the Missouri Economic Conference, March 29-30, 2008, Columbia, Missouri, sponsored by the St. Louis Federal Reserve Bank of St. Louis and the University of Missouri.
29. "A Panel Data Model with Nonparametric Time Effects," North American Productivity Workshop V, Stern School of Business, New York University, New York, NY, June 24 - June 27, 2008.
30. "Recent Methodological Developments in Stochastic Frontier and Data Envelopment Analysis: Where Will They Take Us?," Preconference Workshop of the 2008 Asia-Pacific Productivity Conference, July 17-19, Department of Economics, National Taiwan University, Taipei, Taiwan, 2008.
31. "Krugman and Young Revisited: Sources of Productivity Growth in a World with Less Constraints," Plenary Session of the 2008 Asia-Pacific Productivity Conference, July 17-19, Institute of Economics, Academia Sinica, Taipei, Taiwan, 2008.
32. "Krugman and Young Revisited: A Survey of Sources of Productivity Growth in a World with Less Constraints," Invited speaker, Plenary Session of the 16th SJE-KERI-KIF International Symposium Productivity, Growth and Trade in East Asia, November 27, 2008, Seoul National University.
33. "Stochastic Frontiers with Bounded Inefficiency," Texas Camp Econometrics XIV, January 31-February 1, New Braunfels, Texas, 2009.
34. "The Skewness Problem in Stochastic Frontier Models: Fact or Fiction?," Invited Speaker, Workshop on Exploring Research Frontiers in Contemporary Statistics and Econometrics, Institute of Statistics of the Université Catholique de Louvain, Louvain-la-Neuve, Belgium, May 14-15, 2009.
35. "Panel Data, Factor Models, and the Solow Residual", Keynote Lecture, Anadolu University International Conference in Economics: Developments in Economic Theory, Modeling and Policy, Eskişehir, Turkey, June 17-19, 2009.
36. "On the Productivity of Nations," The XI European Workshop on Efficiency and Productivity Analysis, Pisa, Italy, June 23-26, 2009.
37. "Panel Data, Factor Models, and the Solow Residual", Keynote Lecture, 15th Conference on Panel Data, Bonn, July 3-5, 2009.
38. "Measuring World Productivity," Texas Camp Econometrics 15, La Torretta Lake Resort and Spa, Lake Conroe, Texas, February 20-21, 2010.

39. "Stochastic frontiers with bounded inefficiency," Invited paper, 20th Meeting of the New Zealand Econometric Study Group, Hosted by the Department of Finance, AUT University, Friday-Saturday 26-27 February 2010.
40. "Bounded Stochastic Frontiers with an Application to the US Banking Industry: 1984-2009," Invited paper, International Econometrics Workshop, East Hall, Guanghua Campus, SWUFE, Chengdu, China, August 12, 2010.
41. "Bounded Stochastic Frontiers with an Application to the US Banking Industry: 1984-2009," Econometric Society 10th World Congress, Shanghai, China, 17 - 21 August, 2010.
42. "Analyzing Bank Efficiency: Are "too-big-to-fail" Banks Efficient?," International Workshop on Efficiency and Productivity in Honor of Prof. Knox Lovell, Universidad Miguel Hernández, Elche (Alicante), Spain, September 30-October 5, 2010.
43. "Measuring World Productivity," International Conference on Productivity in East Asia, The Korea Chamber of Commerce & Industry, Seoul, October 20, 2010.
44. "Estimating Consumer Surplus in eBay Computer Monitor Auctions," "Texas Camp Econometrics XVI, Northwest Forest Conference Center, Cypress, TX, February 12-13, 2011.
45. "Analyzing Bank Efficiency: Are "too-big-to-fail" Banks Efficient?," Invited speaker, Anadolu International Conference in Economics, Eskisehir, Turkey, June 15-17, 2011.
46. "How Efficiently Do U.S. Cities Manage Roadway Congestion?," XII European Workshop on Efficiency and Productivity Analysis, Verona, Italy, June 21-24, 2011.
47. "Propensity Scoring Approaches to Address Problems with Two-Stage DEA and Stochastic Frontier Analyses," Invited Speaker, Conference on Efficiency Measurement: New Methods and Application to the Food Sector, University of Toulouse, June 27-28, 2011.
48. "Analyzing Bank Efficiency: Are "too-big-to-fail" Banks Efficient?," Conference in Honor of Peter Schmidt, South Shore Harbour Resort & Conference Center, League City, TX, June 30-July 2, 2011.
49. "Bounded Stochastic Frontiers with an Application to the US Banking Industry: 1984-2009," 17th International Panel Data Conference, Montreal (McGill University-Business School), July 8-10, 2011.
50. "World Productivity Growth and Income Inequality," Invited speaker at the Economic Measurement Group (EMG) 11<sup>th</sup> Annual Workshop in Honor of Erwin Diewert's 70<sup>th</sup> Birthday, Nov. 30-Dec. 2, 2011, Coogee Beach, Sydney, Australia.

51. "Analyzing Bank Efficiency: Are "too-big-to-fail" Banks Efficient?," Keynote Speaker, 'Measuring Economic Performance'- International Workshop on the Evaluation of Economic Performance of Firms, Banks and other Agents, School of Business and Economics, Loughborough University, UK, March 22, 2012. The conference launched the School's Centre for Post-Crisis Finance.
52. "World Productivity Growth and Income Inequality," Economic Research and Policy Analysis Branch at Industry Canada and the Department of Economics at Carleton University, May 3, 2012, Ottawa, Canada.
53. "Banking Crises, Early Warning Models, and Efficiency," 18th International Panel Data Conference, Banque de France, Paris, July 5-6, 2012.
54. "Banking Crises, Early Warning Models, and Efficiency," Renmin University, Beijing, July 13, 2012.
55. "World Productivity Growth and Income Inequality," Plenary speaker, Third International Workshop on Chinese Productivity-Knowledge Production, Regional Development, and International Comparisons, Tsinghua University, Beijing, July 14, 2012.
56. "Pricing Housing and its Characteristics: An Application of Shephard's Dual Lemma," 2012 Asian Pacific Productivity Conference, July 24-27, Bangkok, Thailand.
57. "Analyzing Bank Efficiency: Are "too-big-to-fail" Banks Efficient?," 2012 Asian Pacific Productivity Conference, July 24-27, Bangkok, Thailand.
58. "Bayesian Treatment to Panel Data Models with Time-varying Heterogeneity," invited presentation, Conference in Memory of Lennart Hjalmarsson, University of Gothenburg, Sweden, December 7-8, 2012.
59. "Research Trends in Firm Level Productivity," Rouen Business School, Rouen, France, April 29, 2013.
60. "Looking Forward to Your Research," Plenary Lecture, European Workshop for Efficiency and Productivity Analysis, Helsinki, Finland, June 16-21, 2013.
61. "Bayesian Treatment to Panel Data Models with Time-varying Heterogeneity," 19th International Panel Data Conference, Cass Business School, City University London, July 3-6, 2013.
62. "A Spatial Autoregressive Production Frontier Model for Panel Data: With an Application to European Countries," Measuring Economic Performance: Theory and Practice: International Workshop and the Launch of the Efficiency and Productivity Research Interest Group, School of Business and Economics, Loughborough University, UK, July 8-10, 2013.

63. "A Panel Data Analysis of World Productivity Growth: Heterogeneity, Parameter drift, and Jump Discontinuities," Workshop on Productivity Analysis, University of Miami, Coral Gables, Florida, October 25, 2013.
64. "Panel Data Models: Slope Heterogeneities, Regime changes, and Multiple Jump Discontinuities in the Parameters," Keynote Address, 15th International Symposium on Econometrics, Operations Research and Statistics, Süleyman Demirel University, Department of Econometrics, Isparta, Turkey, May 22-25, 2014.
65. "Productivity Measurement, Model Averaging, and World Trends in Growth and Inequality," Plenary Session Lecture, North American Productivity Workshop VIII, Ottawa, Canada, June 4 - June 7, 2014.
66. "Algorithmic Trading, Market Timing, and Market Efficiency," 6th IFABS Conference on Alternative Futures for Global Banking: Competition, Regulation and Reform, Lisbon, June 18-20, 2014.
67. "Algorithmic Trading, Market Timing, and Market Efficiency," Keynote address for the 3rd International Workshop 'Measuring Banking Performance,' Loughborough University School of Business and Economics, June 26, 2014.
68. "Productivity Measurement, Model Averaging, and World Trends in Growth and Inequality," Plenary Keynote Session on SFA prepared for the APPC 2014, July 8-11, University of Queensland, Brisbane, Australia.
69. "Productivity Measurement, Model Averaging, and World Trends in Growth and Inequality," CEPA Workshop, University of Queensland, 25 July 2014.
70. "A Spatial Autoregressive Stochastic Frontier Model for Panel Data with Asymmetric Efficiency Spillovers," Keynote Address 1, IX Spatial Econometrics Association World Conference, University of Miami, School of Business, Coral Gables, Florida, May 21-23, 2015.
71. "A Spatial Autoregressive Stochastic Frontier Model for Panel Data with Asymmetric Efficiency Spillovers," Keynote Address, EconAnadolu 2015, Anadolu International Conference in Economics, June, 10-12, 2015, Eskişehir, Turkey.
72. "Banking Crises, Early Warning Models, and Efficiency," International Workshop on Efficiency and Productivity, Santander Chair of Efficiency & Productivity, University Research Institute Center of Operations Research (CIO) University Miguel Hernandez of Elche, June 12-13, 2015.
73. "Semiparametric Estimations under Shape Constraints," International Association of Applied Econometrics (IAAE) 2015 Annual Conference, Thessaloniki, Greece, June 25-28, 2015.

74. "A Spatial Autoregressive Stochastic Frontier Model for Panel Data with Asymmetric Efficiency Spillovers," 21st Panel Data Conference, Central European University, Budapest, June 28-30, 2015.
75. "Panel Data and Parametric and Semi-Parametric Stochastic Frontier Models-First Generation Approaches," Keynote Lecture # 1, Workshop on New Developments in DEA and Stochastic Frontiers, Nankai University, Tianjin, China, July 4-5, 2015.
76. "Panel Data and Parametric and Semi-Parametric Stochastic Frontier Models-Second Generation Approaches," Keynote Lecture # 2, Workshop on New Developments in DEA and Stochastic Frontiers, Nankai University, Tianjin, China, July 4-5, 2015.
77. "Business Schools Driving Productivity," Keynote address to the Chartered Association of Business Schools Annual Conference 2015, Delivering Value, Driving Growth, 9-10 November, Manchester, UK.
78. "Treatments for Heterogeneity in Regression Parameters and in Unobservables," International Economic Policy Seminar, ETH Zurich/KOF Swiss Economic Institute and the University of Zurich, March 3, 2016.
79. "Bayesian Treatments to Panel Data Models with Time Varying Heterogeneity," NY Camp Econometrics XI, The 1000 Islands Harbor Hotel, Clayton, NY, April 8-10, 2016.
80. "Total Factor Productivity: Secular Movements and Income Inequality," Keynote Address to the North American Productivity Workshop IX, Quebec City, Canada, June 15-18, 2016.
81. "Treatments for Heterogeneity in Regression Parameters and in Unobservables," 22nd International Panel Data Conference, The Esplanade, Fremantle, Western Australia, June 28-29, 2016.
82. "Productivity, Efficiency, and Endogeneity," Keynote address to the 2016 Asian Pacific Productivity Conference, Tianjin, China, July 7-10, 2016.
83. "The Spatial Efficiency Multiplier and Random Effects in Spatial Stochastic Frontier Models," International Association of Applied Econometrics 2017 Annual Conference, June 26-30, Sapporo, Japan.
84. "Estimation of Industry-level Productivity with Cross-sectional Dependence using Spatial Analysis," Invited lecture in session organized by Erwin Diewert on *New Approaches to Productivity Measurement*, Society for Economic Measurement Annual Symposium, July 26-28, 2017, Samberg Center, MIT, Cambridge, MA.
85. "Resource Allocation in Multidivisional Multiproduct Firms: Examining the Divisional Productivity of Energy Companies," 10<sup>th</sup> North American Productivity Workshop, University of Miami, Coral Gables, Florida, June 13-15, 2018.

86. "Panel Data Models with Multiple Jump Discontinuities in the Parameters," 24th International Panel Data Conference, Sogang University June 19-20, 2018.
87. "Estimating Peer Effects on Educational and Career Choice: A Spatial Multinomial Logit Approach," invited speaker to Advances in Econometrics Conference in Honor of Cheng Hsiao, Oct 26-28, 2018, Baton Rouge, LA, Cook Hotel and Conference Center at LSU.
88. "The Term Structure of Sovereign CDS and Currency Carry Trades," European Workshop for Efficiency and Productivity Analysis," European Workshop for Efficiency and Productivity Analysis XVI, June 10-13, 2019, Senate House, London, UK.
89. "Estimation of Industry-level Productivity with Cross-sectional Dependence by Using Spatial Analysis," 25th International Panel Data Conference, Vilnius, Lithuania, July 4-5, 2019.
90. "Industry-Specific Productivity and Spatial Spillovers through input-output linkages: Evidence from the Asia-Pacific Value Chain," Plenary presentation, virtual North American Productivity Workshop XI, University of Miami, June 8-12, 2020.
91. "Industry-Specific Productivity and Spatial Spillovers through input-output linkages: Evidence from the Asia-Pacific Value Chain," Keynote lecture at EconTR2020@Eskişehir, International Conference on Economics, 2020, Eskişehir Osmangazi University, Eskişehir, Turkey <https://econtr.org/>, September, 10.
92. "Industry-Specific Productivity and Spatial Spillovers through input-output linkages: Evidence from the Asia-Pacific Value Chain," Plenary session at THE SIXTH WORLD KLEMS CONFERENCE (online) 2021, Harvard University, March 17.
93. "Productivity Growth, Economic Well-being, and the Inefficiency of Discrimination and Inequality," Plenary talk at the virtual North American Productivity Workshop (vNAPW), University of Miami, June 7-11, 2021.
94. "Environmental Efficiency in the Supply of Drinking Water," Plenary talk at the virtual North American Productivity Workshop (vNAPW), University of Miami, June 7-11, 2021.
95. "Public Subsidies and Innovation: A Doubly Robust Machine Learning Approach Leveraging Deep Neural Networks," 27th International Panel Data Conference, June 18, 2022, Bertinoro, Italy.
96. "Public Subsidies and Innovation: A Doubly Robust Machine Learning Approach Leveraging Deep Neural Networks," XVII European Workshop on Efficiency and Productivity Analysis (EWEPA), Porto, Portugal, June 27, 2022.
97. "Public Subsidies and Innovation: A Doubly Robust Machine Learning Approach Leveraging Deep Neural Networks," Keynote address to the Asia Pacific



- Productivity Conference 2022 Virtual Meeting, National Taiwan University and the Taiwan Efficiency and Productivity Association, October 8, 2022.
98. "Productivity Growth and Spillovers Across European Industries: A Global Value Chain Perspective Based on EURO KLEMS," The Seventh World KLEMS Conference, University of Manchester, October 12-13, 2022.
  99. "Productivity Growth and Spillovers Across European Industries: A Global Value Chain Perspective Based on EURO KLEMS," School of Economics and Business, University of Oviedo, February 6, 2023.
  100. "Accounting for Environmental Factors in Measuring TFP," Agricultural Productivity Growth: Measurement, Drivers, and Climatic Effects" workshop organized by Economic Research Service, Farm Foundation, and the GAP Initiative of the College of Agriculture and Life Sciences Global at Virginia Tech, March 29, 2023.
  101. "Public Subsidies and Innovation: A Doubly Robust Machine Learning Approach Leveraging Deep Neural Networks," 2nd Inter-Conference Symposium 6to Congreso Regional de Economía Agraria and 1st Latin American Workshop on Productivity and Efficiency, Montevideo, April 19, 2023.
  102. "Homelessness on the West Coast and the Role of Health: Inefficiency and Productivity Loss in American Society," North American Productivity Workshop, Miami Herbert Business School at the University of Miami, June 12-15, 2023.
  103. "Machine Learning and Efficiency Analysis," North American Productivity Workshop, Miami Herbert Business School at the University of Miami, June 12-15, 2023.
  104. "Beyond Borders: How Spillovers and Commercial Networks Shape European Productivity," North American Productivity Workshop, Miami Herbert Business School at the University of Miami, June 12-15, 2023.
  105. "Beyond Borders: How Spillovers and Commercial Networks Shape European Productivity," 8th Annual Conference of the Society for Economic Measurement, University of Milano-Bicocca, 29th June-1st July, 2023.
  106. "Beyond Borders: How Spillovers and Commercial Networks Shape European Productivity," 28th International Panel Data Conference, July 2-3, 2023, University of Amsterdam, organized by The Amsterdam School of Economics (University of Amsterdam) and the Department of Economics (University of Cyprus).

#### DISSERTATION COMMITTEES:

1. Stephen Thurman, Congressional Budget Office (George Washington University, 1978, Chair).

2. Richard Johnson, Department of Justice (George Washington University, 1979, Reader).
3. Janice Shack-Marquez, Board of Governors of the Federal Reserve System (University of Pennsylvania, 1981, Reader).
4. Maureen Pirog-Good, Indiana University, Bloomington (University of Pennsylvania, 1983, Chair).
5. Brian Pinto, World Bank (University of Pennsylvania, 1983, Reader).
6. Hannah Hiles (University of Pennsylvania, 1984, Reader).
7. Paul Beaumont, Purdue University (University of Pennsylvania, 1984, Reader).
8. David Good, Indiana University, Bloomington (University of Pennsylvania, 1985, Chair).
9. Lars Hendrik-Roeller, Wissenschaftszentrum Berlin (WZB), INSEAD, Humboldt University (University of Pennsylvania, 1987, Reader).
10. Rodney Hissong, University of Texas at Arlington (Rice University, 1988, Chair).
11. Maria Amparo Ballivian, World Bank (Rice University, 1988, Chair).
12. Byeong-Ho Gong, Korean Research Institute (Rice University, 1988, Chair).
13. Andreas Zamudio, Centro de Investigación y Docencia Económica (CIDE)-Center for Economic Research and Teaching, Mexico City (Rice University, 1988, Chair).
14. Keun Huh, Samsung Research Institute (Rice University, 1989, Chair).
15. Mary Streitwieser, Center for Economic Studies, Department of the Census (Rice University, 1989, Chair).
16. Antonio Ligaralde, Miami University of Ohio (Rice University, 1990, Reader).
17. Maria-Louisa Escobar, Inter-American Development Bank (Rice University, 1990, Chair).
18. Abdo Yazbeck, World Bank (Rice University, 1991, Chair).
19. John Brooks, Agency for Health Care Policy and Research (University of Michigan, 1992, Reader).
20. Purvez Captain, Ernst & Young, LLP (Rice University, 1993, Chair).
21. Ila Semenick Alam, Tulane University (Rice University, 1994, Chair).

22. Fernando Orozco Ruiz, Pulsar (Mexico) (Rice University, 1994, Chair).
23. Jenny Williams, University of Melbourne (Rice University, 1996, Chair).
24. Neil Arwine, Bilkent University (Rice University, 1996, Reader).
25. Joya Mukherjee, American Express (Rice University, 1997, Chair).
26. Ellen Read, Econ One (California) (Rice University, 1997, Chair).
27. Robert Adams, Federal Reserve Board of Governors (Rice University, 1997, Chair).
28. Elaine Fortowsky, Donaldson, Lufkin, Jenrett (Rice University, 1998, Reader).
29. Patrik Hultberg, University of Wyoming (Rice University, 1998, Chair).
30. Anthony Postert, Authur Anderson (Rice University, 1999, Chair).
31. Sylvester Gaudin, Oberlin College (Rice University, 1999, Reader).
32. Weiyu Gao, Institute for Advanced Study and Scientific Research, Carinthia, Austria (Rice University, 1999, Co-Chair).
33. Ross VanWassenhove (Rice University, 1999, Reader).
34. Ruwan Jayasuriya, The World Bank (Rice University, 2000, Chair).
35. Byeong Jeon, Korea Institute for Public Finance (Rice University, 2001, Reader).
36. Jesse Weiher, Federal Deposit Insurance Corporation (Rice University, 2002, Chair).
37. Lullit Getachew, Pacific Economics Group (Rice University, 2002, Chair).
38. Raul Gonzalez, Tecnologico de Monterrey, Mexico (Rice University, 2002, Chair).
39. Wonho Song, Institute for International Trade and Finance, Seoul (Rice University, 2003, Reader)
40. Hulushi Inanoglu, Department of the Treasury (Rice University, 2003, Reader)
41. Wojtek Dorabialiski Institute for Advanced Studies, Warsaw (Rice University, 2003, Reader)
42. Ick Jin, Central Bank of Korea (Rice University, 2003, Chair)
43. Alexander Ruiz, Central Bank of Venezuela (Rice University, 2004, Chair)

44. Timothy Gunning, James A. Baker Institute for Public Policy Post-Doctoral Fellow (Rice University, 2007, Chair).
45. Junhui Qian, School of Economics and Finance, Shanghai Jiao Tong University (Rice University, 2007, Co-chair).
46. Rahul Vasudev, Ernst and Yong, LLP (Rice University, 2007, Co-chair).
47. Chad Dacus, Center for Naval Analysis (Rice University, 2008, Chair)
48. Cahit Guven, Deakin University, Melbourne Australia (University of Houston, 2008, Reader).
49. Bibo Jiang, Bates White, LLC (Rice University, 2008, Co-chair).
50. Nguyen Nguyen, Barclays, LLC, New York (Rice University, 2008, Chair).
51. David Blazek, Epco, Inc. (Rice University, 2008, Chair).
52. Levent Kutlu, Georgia Institute of Technology (Rice University, 2010, Chair).
53. Pavlos Amanidis, Ernst & Young LLP, Toronto (Rice University, 2011, Chair).
54. Jiaqi Hao, Capital One, Richmond, Va. (Rice University, 2011, Chair).
55. Ying Fang, NetSpend Corporation, San Francisco (Rice University, 2011, Chair).
56. Seda Toklu, Ernst & Young LLP, Houston (Rice University, 2012, Chair).
57. David Fortunato, University of California at Merced (Rice University, 2012, External Reader for Political Science Ph.D. committee)
58. Ronghua Guo, The Federal Home Loan Mortgage Corporation (FHLMC, aka Freddie Mac), Washington, D. C. (Rice University, 2012, Chair).
59. Pavlo Demchuk, Ernst & Young LLP, Moscow (Rice University, 2012, Chair).
60. Michael Naaman, Christensen & Associates, Madison, WI (Rice University, 2012, Chair).
61. Trang Dinh, Institutional Research Analyst, Office of the Provost, Princeton University (Rice University, 2014, Chair).
62. Andre Barbe, International Trade Commission, Washington, D. C. (Rice University, 2014, Reader)
63. Alexander Chaudhry, Texas Tech University School of Business (Rice University, 2014, External Reader)

64. Junrong Liu, Integrated Financial Engineering, Inc. (IFE Group) Washington, D. C. (Rice University, 2014, Chair)
65. Kerem Tuklu, Deloitte LLP, Houston (Rice University, 2014, Chair)
66. Chenjun Shang, The Federal Home Loan Mortgage Corporation-Modeling and Analytics Group (FHLMC, aka Freddie Mac), Washington, D. C. (Rice University, 2015, Chair).
67. James Gualtieri, Ernst & Young, LLP (aka EY), New York (Rice University, 2015, Co-Chair).
68. Devin Garcia, Ernst & Young, LLP, Houston (Rice University, 2016, Chair).
69. Jaepil Han, Korean Development Institute, Seoul (Rice University, 2016, Chair).
70. Binlei Gong, Zhejiang University, Hangzhou (Rice University, 2016, Chair).
71. Edwin Hu, Securities & Exchange Commission (SEC), Washington, D. C. (Rice University, 2016, Reader).
72. Mac Gaulin, Utah State University, (Rice University, 2017, Reader).
73. Ioannis Spyridopoulos, American University, Washington, D. C. (Rice University, Reader, 2017).
74. Daisy Ding, Santander Bank, Boston, Data Analytics (Rice University, 2018, Chair).
75. Erik Meyer, Southern Methodist University School of Business (Rice University, 2018, Reader).
76. Shasha Liu, Federal Home Loan Mortgage Corporation (Freddie Mac), Senior Economist, Quantitative Analytics, Washington, D.C. (Rice University, 2019, Chair).
77. Nigel Soria, Kansas Department of Commerce, Chief Economist (Rice University, 2020, Chair).
78. Van Ngo, Economist, Christensen Associates, Madison, Wisconsin (Rice University, 2020, Chair).
79. Kerda Varaku, Senior Associate, KPMG, Washington, D.C. (Rice University, 2021, Co-Chair).
80. Daniel Prudencio, Assistant Professor, Instituto Tecnológico y de Estudios Superiores de Monterrey (ITESM) (Rice University, 2021, Chair).
81. Michael Clarke, (Rice University, 2021, Reader).

82. Mahya Amani, University of Kansas, Lecturer, (Rice University, 2021, Reader).
83. Fisher Yu, Digonex, (Rice University, 2023, Reader).

Rice Undergraduate Honors Theses (Director/Co-Director)

1. Jan Dudek: “Do Children from non-nuclear Families leave Home Early?” 2016.
2. Yue Zhang: “Impacts of Artificial Intelligence on Income Inequality: A World and Sectoral Perspective,” 2017.
3. Hanqing Sun: “The Differential Determinants of Educational Attainment and their Impact on Earnings for Urban and Migrant Chinese Workers.” 2017.
4. Yimeng Tang: “Do schools in wealthier neighborhoods perform better?” 2017.
5. Jae Han: “Direct Response, Gender, and the Effects of Health and Mental Health on Labor Force Participation: The Case of Korea,” 2018.
6. Malvika Govil: “Evaluating the Performance of US State Health Systems with Spillovers in Cardiovascular Health Outcomes,” 2018.
7. Meghana Gaur: “Spatial Interactions in the Patent-R&D Model,” 2019.
8. Jo Ruochen Zhang: “Fertility and Gender Wage Gap in China: Evidence from CHIPs Data,” 2019.
9. David Cai: “The Effect of Judge Ideology on the Outcome of American Consumer Bankruptcy Cases, 2001-2004,” 2019.
10. Corey Fuller: “Homelessness on the West Coast: What Role Does Health Play?,” 2020.
11. Kira Lüscher: “Private Value Formation in the Secondary Fashion Market: An Empirical Analysis of Online Auction Outcomes,” 2020.
12. Cade Bellow: “Average Treatment Effects and the NBA Salary Cap: A Neural Network Approach,” 2021.
13. Nathan Kaplan: “Small Business Lending Relationships During the Financial Crisis,” 2021.
14. Autumn Engebretson: Carbon Dioxide Pipeline Development in Texas for the Scaled Deployment of Carbon Capture, Utilization, and Storage (CCUS),” (Co-director with Dr. Kenneth Medlock III), 2021.
15. Vicente Iglesias: “An Analysis of Optimal Unemployment Insurance during the

Covid-19 Crisis,” (Co-director with Professor Maua Coughlin), 2021.

16. Sree Yeluri: “A Productivity Analysis of Chilean Copper Mining,” (Co-director with Dr. Michelle Foss), 2021.

#### CONSULTING EXPERIENCE

Consultant for, among others, the Department of Health and Human Services, Air Transport Association, AT&T, Department of Justice, International Food Policy Research Institute, ABT Associates, Ernest and Young, National Aeronautics and Space Administration, Department of Defense, United States Postal Service, Wharton Econometric Forecasting Associates, Nathan Associates, United States Agency for International Development, and LECG, LLC, CRA, Accumyn, LLC. As a testifying expert and consultant for a number of law firms Sickles has had engagements in antitrust, trade secret, patent infringement, discrimination, corporate liability, and personal injury cases.