

CURRICULUM VITA

Tung Liu

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PROFESSIONAL BACKGROUND

Name: Tung Liu
Title: Professor Emeritus
Department of Economics
Miller College of Business
Ball State University
Address: Department of Economics
Miller College of Business
Ball State University
Muncie, IN 47306
Office: WB 283
Phone: (765) 285-5360
Email: tliu@bsu.edu
Webpage: <https://people.bsu.edu/tliu/>

Area of Academic Discipline Specialization: Economics

Degrees:

Doctorial Degree:

Name of Degree: Ph.D. Economics
Year Conferred: 1990
Degree-Granting Institution: University of California, San Diego
Principal Academic Unit: Economics
Major Field of Study: Econometrics
Dissertation Title: Time Series Analysis of Synchronization and Chaos
Committee Members: Clive W. J. Granger (Chairman), Walter P. Heller, and
Halbert White

Master's Degree:

Name of Degree: Master of Arts
Year Conferred: 1981
Degree-Granting Institution: Soochow University, Taipei, Taiwan
Principal Academic Unit: Economics
Major Field of Study: Economics
Dissertation Title: The Relationship between Agricultural and Industrial Sectors
in Taiwan after World War II.

Bachelor's Degree:

Name of Degree: Bachelor of Arts
Year Conferred: 1978
Degree-Granting Institution: Soochow University, Taipei, Taiwan

Principal Academic Unit: Economics
Major Field of Study: Economics

Research Fields:

Applied Econometrics, Time Series Analysis, Applied Finance, Statistics, China Economy, Economics of Education, Panel Data Analysis

Academic Experience:

2012-2024	Professor, Department of Economics, Miller College of Business, Ball State University, Muncie, Indiana
2004-2013	Chairman, Department of Economics, Miller College of Business, Ball State University, Muncie, Indiana
1998-2012	Associate Professor, Department of Economics, Miller College of Business, Ball State University, Muncie, Indiana
1999-2002	Assistant Chair, Department of Economics, Miller College of Business, Ball State University, Muncie, Indiana
1990-1998	Assistant Professor, Department of Economics, Miller College of Business, Ball State University, Muncie, Indiana
1989 Summer	Research Assistant to Dr. Clive W.J. Granger, Department of Economics, University of California, San Diego
1989 Spring	Research Assistant to Dr. Walter P. Heller, Department of Economics, University of California, San Diego
1985-1990	Teaching Assistant, Department of Economics, University of California, San Diego
1980-1981	Teaching Assistant, Department of Economics, Soochow University, Taipei, Taiwan

INSTRUCTIONAL EXPERIENCE FOR MOST RECENT CALENDAR YEAR

Courses Taught: (1990 – 2024)

Econ 201 Elementary Microeconomics
Econ 202 Elementary Macroeconomics
Econ 221 Business Statistics (Both online and in-person courses)
Econ 279 Economic and Political Problems of Emerging Nations
Econ 424/524 Introductory Econometrics
Econ 624 Advanced Econometrics
MBA 605 Statistics for Business Decisions
MBA 607 Managerial Macroeconomics
MBA 611 Statistics and Quantitative Methods

Educational Innovation and Technology:

Econ 221 Online Course, 2014 - 2024
Web Interface for CRSP Stock Files, 1998

Web Interface for CRSP Indices File, 1998
Web Interface for DRI Basic Economics Database, 1997

Other Indications of Teaching Effectiveness:

Course Packet for Econ 221 Business Statistics
Course Packet for Econ 279 Economic and Political Problems of Emerging Nations
Course Packet for Econ 424/524 Introductory Econometrics
Course Packet for MBA 605 Statistics for Business Decisions
Course Packet for MBA 607 Managerial Macroeconomic
Course Packet for MBA 611 Statistics and Quantitative Methods

Instructional Grants:

Undergraduate Technology Fellow, Miller College of Business: 2000
Academic Courseware Development Program, Ball State University: 1994, 1998

Instructional Awards:

Dean Teaching Award: 1999, 2000
College of Business, Ball State University

Educator of the Year: 1994
Delta Sigma Pi Fraternity
College of Business, Ball State University

Excellence in Teaching Award: 1988
Department of Economics
University of California, San Diego

SCHOLARLY ACTIVITIES

Refereed Journal Articles Publications:

Rathinasamy, R.S. & Liu, T. (2023) The Performance of U.S. Economic Fundamentals in The U.S. Dollar's Long-Term Cycles, *Journal of Theoretical Accounting Research*, 18(3), 22-53.

Liu, T. (2021) Measuring Cost Inefficiency: A Dual Approach. *Economic Modelling*, Vol 99.

Liu, T., Shang, S., Coelho, P. R.P. (2017). When Batterer Becomes Murderer: An Analysis with Conditional Independence. *Law, Probability & Risk*, 6(2-3), 131-136.

Liu, T., Coelho, P. R.P. (2017). The Returns to College Education - An Analysis with College-Level Data. *Eastern Economic Journal*, 43(4), 604-620.

- Fields, T., Earhart, C.A., Liu, T., & Campbell, H. (2013) A Hedonic Model for Off-Campus Student Housing: The Value of Proximity to Campus. *Housing and Society* 40 (1) 41-60.
- Liu, T. & Li, K.-W. (2012) Analyzing China's Productivity Growth: Evidence from manufacturing Industries. *Economic Systems* 36(4), 531-551.
- Li, K.-W., & Liu, T. (2011). Economic and Productivity Growth Decomposition: An Application to Post-reform China. *Economic Modelling* 28(1-2), 366-373.
- Liu, T., Santoni, G. J., & Stone, C. C. (2009). Federal Securities Regulations and Stock Market Returns. *Journal of Financial and Economic Practice* Fall 2009, 15-34.
- Bask, M., Liu, T., & Widerberg, A. (2007). The Stability of Electricity Prices: Estimation and Inference of the Lyapunov Exponents. *Physica A* 376, 565-572.
- Liu, T., & Li, K.-W. (2006). Disparity in Factor Contributions between Coastal and Inner Provinces in Post-reform China. *China Economic Review* 17(4), 449-470.
- Liu, T., & Spector, L. C. (2005). Dynamic Employment Adjustments Over Business Cycles. *Empirical Economics*, 30(1), 151-169.
- Chu, C.-S., Liu, T., & Rathinasamy, R. S. (2004). Robust Test of the January Effect in Stock Markets Using Markov-Switching Model. *Journal of Financial Management and Analysis* 17(1), 22-33.
- Li, K.-W., & Liu, T. (2004). Performance of Financial Resources in China's Provinces. *Journal of the Asia Pacific Economy* 9(1), 32-48.
- Li, K.-W., & Liu, T. (2001). Financial Liberalization and Growth in China's Economic Reform. *World Economy* 24(5), 673-687.
- Liu, T., & Li, K.-W. (2001). Impact of Liberalization of financial resources in China's economic growth: Evidence from Provinces. *Journal of Asian Economics* 12(2), 245-262.
- Liu, T., & Stone, C. C. (1999). Critique of One Tailed Hypothesis Test Procedures in Business and Economics Statistics Textbooks. *Journal of Economic Education* 30(1), 59-63.
- Gencay, R., & Liu, T. (1997). Nonlinear Modeling and Prediction with Feedforward and Recurrent Networks, *Physica D* 108, 119-134.
- Chu, C.-S., Santoni, G., & Liu, T. (1996). Stock Market Volatility and Regime Shifts in Returns. *Information Science* 94(14), 179-190.
- Kuan, C.-M., & Liu, T. (1995). Forecasting Exchange Rates Using Feedforward and Recurrent Neural Networks. *Journal of Applied Econometrics* 10(4), 347-364.

Liu, T., Santoni, G., & Stone, C. C. (1995). In Search of Stock Market Bubbles: A Comment on Rappoport and White. *The Journal of Economic History* 55(3), 647-654.

Santoni, G., & Liu, T. (1993). Circuit Breakers and Stock Market Volatility, *Journal of Futures Markets* 13(3), 261-277.

Liu, T., Granger, C. W. J., & Heller, W. P. (1992). Using the Correlation Exponent to Decide whether an Economic Series is Chaotic. *Journal of Applied Econometrics* 7 (December) S25-S39; Reprinted in M. Hashem Pesaran and Simon M. Potter edition. *Nonlinear Dynamics, Chaos and Econometrics*. John-Wiley and Sons. 17-31.

Conference Proceedings in Scholarly Meetings:

Li, K.-W., Liu, T., Lam, H. K., & Wang., L. (2010). Productivity Growth among Chinese Mainland Regions and Hong Kong, in Yuan, Zhiguang (ed), *The World Economy in Financial Crisis*, Shanghai Forum Series 2009, Shanghai People's Publisher, May: 160-187.

Kuan, C.-M., & Liu, T. (1993). Recurrent Back-Propagation and Newton Algorithms for Training Recurrent Neural Networks. *Proceedings of the International Symposium on Substance Identification Technologies*.

Working Paper

Liu, T. (2022) Estimators Under Correlated Random Effects Models with Cluster Data

Liu, T., Coelho, P. R.P. (2019) Exploring Partial Effects in Cluster Sampling – A Critique of Within-Group Estimators.

Liu, T., Li, K. W. (2018). Empirics of Growth and Industrialization: Evidence from World Economy and Income Groups.

Liu, T. & Li, K.-W. (2008). Revisiting Solow's Decomposition of Economic and Productivity Growth. Ball State University, Working Paper ECWP200601.

Liu, T. & Stone, C.C. (2007). Law and Statistical Disorder: Statistical Hypothesis Test Procedures and the Criminal Trial Analogy. Ball State University, Working Paper ECWP200601R1.

Research Grants

Co-Investigator, (PI: Li, K.-W.) Productivity and efficiency analysis in post-reform China: national, regional and industrial dimensions, City University of Hong Kong, Project no: 7002175 (9/2007-4/2009)

Co-Investigator, (PI: Li, K.-W.) Efficiency and productivity in China's post-reform growth, City University of Hong Kong, Project no: 7001907 (4/2006-3/2008).

Co-Investigator, (PI: Li, K.-W.) Measure of endogenous growth in China's post-reform economy, City University of Hong Kong, Project no: 7100244 (5/2002-4/2003).

George A. and Frances Ball Research Grants, 1991, 1992, 1997

University Summer Research Grant: 1993

Presentations at Conferences:

"Estimators Under Correlated Random Effects Models with Cluster Data" Southern Economic Association 89th Annual Meetings, Fort Lauderdale, FL, November 21, 2022.

"Measuring Cost Inefficiency Based on the Duality Theorem" Southern Economic Association 89th Annual Meetings, Fort Lauderdale, FL, November 23, 2019.

"Exploring Partial Effects in Cluster Sampling – A Critique of Within-Group Estimators" 2019 Midwest Economics Association Annual Meeting, St. Louis, MO., March 16, 2019.

"Empirics of Economic Growth and Industrialization." 85th Annual Conference of the Southern Economic Association Conference, New Orleans, November 21, 2015.

"Empirics of Economic Growth and Industrialization Using Growth Identity Equation." 11th Annual Conference of Asia-Pacific Economic Association. Taipei, Taiwan. July 8, 2015.

"Returns to College Education – An Analysis with College Level Data," 48th Annual Conference of the Canadian Economics Association, Canadian Economics Association, Simon Fraser University, Downtown Vancouver, Canada. May 30, 2014.

"Disparity in Factor Contributions between Coastal and Inner Provinces in Post-reform China." Western Social Science Association Annual Meeting, Western Social Science Association. Phoenix. April 21, 2006.

"Asymmetric Effects of Fiscal Policy." Midwest Economics Association Annual Meeting, Midwest Economics Association. Chicago. March 24, 2006.

"Investment and capital disparity between coastal and inner provinces in Mainland China" International Conference on Advanced Science and Technology. Chicago. September 10, 2005.

"Law and Statistical Order." East Economics Association Annual Meeting. New York. March 6, 2005.

"Federal Securities Regulations and Stock Market Returns." Midwest Economics Association Annual Conference. Chicago. 2004.

"Impact of Liberalization of Financial Resources in China's Economic Growth: Evidence from Provinces." American Economic Association Annual Conference. New Orleans. January 5-7, 2001.

"The Nonlinear Intraday Pattern of Futures Market Exchange Rates: An Application of Neural Network Models." Conference on Computational Economics and Finance, Sixth International Conference. Boston College. Boston. June, 1999.

- “Stock Market Volatility and Regime Shifts in Returns.” Chia-Shang Chu, Gary Santoni., and Tung Liu. Second Annual Joint Conference on Information Sciences. Wrightsville Beach, North Carolina. August 1995.
- “A Critique of One Tailed Hypothesis Test Procedures in Business and Economics Statistics Textbooks.” Tung Liu and Courtenay C. Stone, Midwest Economic Association Conference. Cincinnati, Ohio. April 1994.
- “The Markov-Switching Model vs. Dummy Variable Regression in Analyzing the January Effect.” Chia-Shang Chu and Tung Liu. Western Economic Association International Conference. Vancouver, Canada. July 1994.
- “Nonlinear Modeling and Prediction with Feedforward and Recurrent Networks.” SPIE's 1994 Conference, International Symposium on Optics, Imaging, and Instrumentation. San Diego, California. July 1994.
- “Forecasting Exchange Rates Using Feedforward and Recurrent Neural Networks.” Chung-Ming Kuan. and Tung Liu, Econometric Society Winter Meeting, New Orleans, Louisiana. January 1992.

Other Presentations:

- "Federal Securities Regulations and Stock Market Returns." University of Mississippi, Economics Department Seminar, University of Mississippi, Department of Economics. October 13, 2006.
- “Federal Securities Regulations and Stock Market Returns.” Butler University. Tung Liu, Gary Santoni., and Courtenay C. Stone. Indiana, 2004.
- "Using BSU Online Financial and Economic Databases." Midwest Economics Association. Chicago. 2004.
- “Dynamic Employment Adjustments Over Business Cycles.” City University of Hong Kong. Hong Kong. 2001.
- “In Search of Stock Market Bubbles: A Comment on Rappoport and White.” Tung Liu, Gary Santoni., and Courtenay C. Stone., Butler University, Indiana, 1994.
- “Nonlinear Modeling and Prediction with Feedforward and Recurrent Networks.” Indiana University at Bloomington. Indiana. 1993.

Referring Journal Articles for Journals:

World Development
 Economic Systems
 Economic Modelling
 Physica A
 China Economic Review
 Papers in Regional Science
 Financial Research Letters
 Journal of Behavioral Accounting & Finance
 Discrete Dynamics in Nature and Society
 The Quarterly Review of Economics
 Journal of Economic Education
 Journal of Risk and Financial Management

Computers and Operations Research.
The Journal of Futures Markets
Journal of Money, Credit, and Banking
Mid-American Journal of Business
Taiwan Economic Review
Journal of Business and Economic Statistics
Studies in Nonlinear Dynamics and Econometrics

Textbook Reviews:

Diebold, Landon-Lane and Swanson, Applied Statistics for Business, Economics, and Finance.
Alwan, Craig, and McCabe, The Practice of Statistics for Business and Economics, 5ed
Newbold, Carlson, and Thorne, Statistics for Business and Economics
Todaro and Smith, Economic Development
Pekoz, The Manager's Guide to Statistics, W.H. Freeman Publishers.
Brue, McConnell, Flynn, and Grant "Essentials of Economics" 2nd edition.
Sharpe/DeVeaux/Velleman, Business Statistics
Saraniti/Sanholm, Vital Statistics: Probability and Statistical Inference for Economic and Business Decisions
Francis X. Diebold, Elements of Forecasting
Stock and Watson, Introduction to Econometrics
Dielman, Data Analysis for Management Decision

Work in Progress:

Liu, T. Estimators Under Correlated Random Effects Models with Cluster Data
Liu, T., Li, K. W. Empirics of Growth and Industrialization: Evidence from World Economy and Income Groups.

Other Scholarly Activities:

Kabul University Faculty of Economics Capacity Building. November 10, 2015 - May 1, 2016.

Visiting Research Scholar to City University of Hong Kong, May 14-18, 2001

Exchange Scholar to Shanghai Normal University, China, May 19-22, 2001

Computer Program: NETLE- Feedforward Neural Networks and Lyapunov Exponents Estimation by Chung-Ming Kuan., Tung Liu, and Ramazan Gencay. Version 3.01, February 1995; Version 4.1, 2007

SERVICE ACTIVITIES

Student Advising:

Faculty Advisor for Economics Major and Minors (1999 – 2015)
Faculty Advisor for Teaching Major in Social Studies (1999 – 2022)
Departmental Internship Coordinator (2010 – 2022)
Committee member for Ph.D. Students (2000 – 2003, 2017 – 2019, 2019 – 2023)
Committee member for a master student (2011)
Kabul University MBA Program Thesis Supervisor (September 2017 - December 2017).

Professional and Academic Organization Activities:

Salary Committee, Miller College of Business (2004 – 2022)
Salary Committee, Department of Economics (2004 – 2022)
University Promotion and Tenure Committee (2017 – 2021, 2023-2024)
Promotion and Tenure Committee, College of Business (2014 - 2017)
Promotion and Tenure Committee, Department of Economics (2004 – 2022)
Graduate Curriculum Committee, Miller College of Business (2002 – 2003, 2014 – 2016, 2020 – 2022)
Graduate Curriculum Committee, Department of Economics (2002 – 2003, 2014 – 2016, 2020 – 2022)
Departmental Journal List Committee, (2016 – 2024)
Undergraduate Curriculum Committee, Miller College of Business (2018 – 2020)
Undergraduate Curriculum Committee, Department of Economics (2018 – 2020)
College Assessment of Learning Committee, (2016 – 2022)
Department Internship Coordinator, (2011 – 2022)
Faculty Mentor, The Office of Disability Services, Ball State University, (2010 – 2024)
Executive Committee, Miller College of Business (2004 – 2013)
Hiring Committee, Department of Economics (2004 – 2013)
Curricular Technology Integration Committee, Miller College of Business (1992 – 2005)
Global Business Program, Miller College of Business (2004 – 2008)

Other Services:

Faculty Mentor and Presenter, Supporting Fulbright Visiting Scholars, Fulbright Visiting Scholar Program, University. (June, 2019 - September, 2019)
Faculty Mentor for Visiting Scholar. (August 2017 - December 2017)
External Review for Promotion to Full Professor, Indiana University Northwest and Georgia Southern University, 2016.
Participating AACSB Assessment of Learning Seminar II, Tampa FL. (October 2016).
Participating AACSB Assessment of Learning Seminar, St. Louis. (October 2013).
Organize the department working paper series (2005 – 2015)
Maintain Department of Economics homepage (1999 – 2002, 2008 – 2015)
Member of Faculty Mentor Program in the Office of Disability Services (2010 – 2024)
Organize the Economics Advisory Board (2012 – 2013)
Organize the department seminar series (2004 – 2013)