

**Show- Ling Jang 鄭秀玲**

Department of Economics  
 College of Social Sciences  
 National Taiwan University  
 No.1, Sec.4, Roosevelt Road  
 Taipei, 10617 Taiwan  
 Tel. Number: 886-2-3366-8412  
 E-mail: showling.jang@gmail.com

**Present Position:**

- Chair, Department of Economics, College of Social Sciences, National Taiwan University, Aug. 2012 - present.
- Professor, Department of Economics, College of Social Sciences, National Taiwan University, Aug. 2006 - present.

**Past Position:**

- ◆ Director, Research and Development Office, College of Social Sciences, National Taiwan University, Aug. 2008 – July 2012.
- ◆ Associate Professor of Economics, National Taiwan University, Aug. 1992-July 2006.
- ◆ Visiting Scholar, Department of Economics, U.C., Berkeley, Feb.-Aug., 2001.
- ◆ Visiting Assistant Professor, Rensselaer Polytechnic Institute, 1991-1992.
- ◆ Visiting Assistant Professor, Department of Decision Science, George Mason University, 1990-1991.
- ◆ Expert Witness, Washington D.C. Public Service Commission, 1989-1990.
- ◆ Staff, Construction and Planning Agency, Ministry of the Interior, Taiwan, 1981 - 1984.
- ◆ Staff, a private company on international trade, 1978-1979.

**Education:**

- ◆ B.A., Dept. of Economics, National Taiwan University, 1974 -.1978.
- ◆ M.S., Graduate Program of Civil Engineering (Urban Planning), National Taiwan University, 1979 - 1981.
- ◆ Ph.D. in Economics, Rensselaer Polytechnic Institute, U.S.A., 1984 -

1987.

### **Honor:**

- Outstanding research award of National Taiwan University 學術研究績效優良期刊獎勵, 2013.
- Outstanding research award of National Taiwan University 學術研究績效傑出期刊獎勵, 2012.
- Outstanding research award of National Taiwan University 學術研究績效傑出期刊獎勵, 2011.
- Outstanding research award of National Taiwan University 學術研究績效優良期刊獎勵, 2010.
- Outstanding teacher award of National Taiwan University 教學優良獎, 2005.
- Research programs granted by National Science Council, Taiwan, 2001-2013.
- Outstanding research grants (甲種獎勵) by National Science Council, Taiwan, 1994-2000.
- Consultant, Taiwan Institute of Economic Research, 2004-2008.
- Advanced Research Award of Fulbright Scholar Program, U.S., 2001.
- Member of Telecommunications Evaluation Committee, Taiwan, 1998-1999.
- Consultant, Industrial Technology Research Institute (ITRI), Taiwan, 1999.
- Advisor of the graduate student, Yung-Hsu Tsui (崔永序), who won the Outstanding Thesis Award of Taiwan Economic Association (碩士論文獎) on “Measuring Firm's Technology Diversification : An Example from Herfindahl-Hirshchman Index,” 2011.
- Advisor of the graduate student, Shu-Ching Chang (張淑卿), who won the Outstanding Thesis Award of Taiwan Economic Association (碩士論文獎) on “Patent Citations and International Knowledge Spillover: Evidence in IT Industry,” 2003.
- Advisor of the graduate student, Guo-gung Huang (黃國綱), who won the Outstanding Thesis Award of Taiwan Economic Association (碩士論文獎) on “Patent Value and the R&D Production Function: The Case Study

of ITRI,” 2001.

- Advisor of the graduate student, Chung Hsin Chou (周群新), who won the Outstanding Thesis Award of Taiwan Economic Association (碩士論文獎) on “Banks’ Cost Structure and Risk-adjusted Efficiency,” 1997.
- Advisor of the graduate student, C.C. Chen (陳欽奇), who won the Outstanding Thesis Award of Taiwan Economic Association (碩士論文獎) on “The Cost Structure of Taiwan SME Banks and Technology Efficiency,” 1996.
- Advisor of the graduate student, Yu-Ting Lin (林宇庭), who won the Outstanding Thesis Award of Taiwan Economic Association (碩士論文獎) on “The Economic Analysis of Technological Change in Taiwan’s Telecommunications Service Industry:1961-1993,” 1993.
- Research Associateship granted by U.S. American Statistical Association /NSF/Census, 1990.
- Passing the Senior Examination (高考) of Civil Service on Construction and Planning, 1981.

## **Publication**

### **[A] Periodical papers**

1. “Innovation and Production in the Global Solar Photovoltaic Industry”, 2013, *Scientometrics*, SSCI & SCI, vol. 94:3, 1021-1036, (Coauthor with Li-Ju Chen, Jennifer Chen and Yu-Chieh Chiu).
2. “The Patterns and Propensity for International Co-invention: The Case of China”, 2013, *Scientometrics*, SSCI & SCI, vol. 94:2, 481-495, (Coauthored with Jennifer Chen and Chiao-Hui Chang).
3. “Strategic Partnership and Its Effect on External Learning of Technology Descendents”, 2012, *Scientometrics*, SSCI & SCI, vol. 92:1, 157-179, (Coauthored with Jennifer Chen, Shihmin Lo and Chi-Cho Huang).
4. “Emerging Firms in an Emerging Field: An Analysis of Patent Citations in Electronic-paper Display Technology”, 2011, *Scientometrics*, SSCI & SCI, vol. 89:1, 259-272, (Coauthored with Yun-Chen Yu and Tzu-Ya Wang).
5. “What Determines How Long An Innovative Spell Will Last?” 2011, *Scientometrics*, SSCI & SCI, vol. 86:1, 65-76, (Coauthored with Jennifer

Chen).

6. "Measuring Technological Diversification: Parceling out the Effect of Patent Scale and Patent Scope", 2010, *Scientometrics, SSCI & SCI*, vol. 84:1, 265-275, (Coauthored with Jennifer Chen and Sonya Wen).
7. "The Impact of M & A on Company Innovation: Evidence in U.S. Medical Device Industry," 2010, *Scientometrics, SSCI & SCI*, vol. 84:1, 119-131, (Coauthored with Chih-Hao Lin).
8. "How Do Latecomers Catch Up with Forerunners? Analysis of Patents and Patent Citations in the Field of Flat Panel Display Technologies," 2009, *Scientometrics, SSCI & SCI*, Vol. 79:3, 563-591, (Coauthored with Shihmin Lo and Wen-hau Chang).
9. "Persistent Innovation: A Cross-Country Study of Output and Diversity Over Time," 2008, *Applied Economics Letters, SSCI & ECONLIT*, Vol. 15:4, 323-326, (Coauthored with Yen-Ting Tsai and Jennifer Chen).
10. "Public R&D and Industrial Innovations at the Project Levels: An Exploration of Taiwan's Public Research Projects," 2005, *Contemporary Economic Policy, SSCI & ECONLIT*, Vol. 23:4, 636-646, (Coauthored with Guo-Gang Huang).
11. "The Pattern and Externality Effect of Diffusion of Mobile Telecommunication, the Case of the OECD and Taiwan," 2005, *Information Economics and Policy, SSCI & ECONLIT*, vol. 17:2, 133-148, (Coauthored with Shau-Chi Dai and Simona Sung).
12. "Industrial Diversification and Its Impact on Productivity in Taiwan's Electronics Industry," 2005, *Asian Economic Journal, SSCI & ECONLIT*, Vol. 19:4, 423-443, (Coauthored with Ming-Hung Wing and Yangzi Wang).
13. "The Evaluation of Public Science & Technology Projects in Taiwan," 2005, *Journal of Social Sciences and Philosophy, TSSCI*, Vol. 17:3, 459-489, (Coauthored with Guo-gung Huang) (In Chinese). "政府資助的產業創新活動:以工研院科專計畫為例," 2005, 《人文及社會科學集刊》, Vol. 17:3, 459-489, (與黃國綱合著).
14. "Patent Citation and International Knowledge Spillovers: Evidence from I.T. Industry," 2005, *Academia Economic Papers, TSSCI*, Vol. 33:1, 103-140, (Coauthored with Shu-Ching Chang) (In Chinese). "專利引證和國際知

- 識外溢：以電子業為例”，2005,《經濟論文》Vol. 33:1,103-140 (與張淑卿合著)。
15. “Market Structure and Performance in Taiwan Banking Industry,” 2000, *Advances in Pacific Basin Business, Economics and Finance*, Vol. 4, 207-219, (Coauthored with Cheng-Hau Peng).
  16. “Scale, Diversification and Efficiency in Taiwan Banking Industry: A Data Envelopment Analysis Approach,” 2000, *Journal of Social Sciences and Philosophy*, TSSCI, Vol. 12:1, 103-148, (Coauthored with Yu-shuo Liou) (In Chinese). “銀行規模、多角化程度與經營效率分析：資料包絡法之應用,” 2000,《人文社會科學集刊》12:1, 103-148, (與劉育碩合著)。
  17. “The Effects of Bank Mergers,” 2000, *Monthly Journal of Taiwan Economics and Finance*, Vol. 36:11, 37-48, (Coauthored with Yan-Zhi Wang) (In Chinese). “銀行併購風潮及其經濟效益評估”，2000《台灣經濟金融月刊》，36:11,37-48, (與王衍智合著)。
  18. “A Risk-Adjusted Cost Function for Banks in Taiwan,” 1999, *Academia Economic Papers*, TSSCI, Vol. 27:2, 247-281, (Coauthored with Chung Hsin Chou) (In Chinese). “調整風險後之銀行成本函數分析：以台灣銀行業為實證研究”，1999,《經濟論文》27:2, 247-281,(與周群新合著)。
  19. “Risk-Adjusted Efficiency in the Taiwan Banking Industry,” 1998, *Taiwan Economic Review*, TSSCI, Vol. 26:3, 337-366, TSSCI, (Coauthored with Chung Hsin Chou) (In Chinese). “調整風險後之銀行效率分析：台灣銀行業的實證研究”，1998,《經濟論文叢刊》，26:3, 337-366, (與周群新合著)。
  20. “An Empirical Analysis of Technological Change for the Taiwan Telecommunications Service Industry,” 1998, *Taiwan Economic Review*, TSSCI, Vol. 26:2, 161-192, (Coauthored with Yu-Ting Lin) (In Chinese). “台灣電信服務業技術變動之經濟分析：1961-1993”，1998,《經濟論文叢刊》，26:2, 161-192, (與林宇庭合著)。
  21. “The Cost Structure and Productivity of the SME Banks in Taiwan,” 1997, *Taiwan Economic Review*, TSSCI, Vol. 25:1, 45-72, (Coauthored with C.C. Chen and J.T. Liu) (In Chinese). “台灣中小企銀體系的成本結構及生產力實證分析”，1997,《經濟論文叢刊》，25:1,45-72, (與陳欽奇及劉錦添合著)。
  22. “Efficiency in the Taiwan’s SME Banks: 1986-1994,” 1997, *Academia Economic Papers*, TSSCI, Vol. 25:1, 69-95, (Coauthored with J.T. Liu and C.C. Chen) (In Chinese). “台灣中小企業銀行效率之分析：1986-1994年”，1997,《經濟論文》，25:1, 69-95, (與劉錦添及陳欽奇合著)。

23. "Economies of Scale and Density for the Taiwan Power Company," 1997, *Journal of Social Sciences and Philosophy*, TSSCI, Vol. 9:1, 125-159, (Coauthored with H.W. Niu and S.E. Wang) (In Chinese). "台電公司之長短期規模經濟與密度經濟研究", 1997, 《人文及社會科學集刊》, 9:1, 125-159, (與牛慧雯及王小娥合著).
24. "A Survey on Economies of Scale, Economies of Scope and Efficiency in the Banking Industry," 1996, *Taipei Economic Inquiry*, TSSCI, Vol. 34 : 2 , 111-147, (Coauthored with C.C. Chen) (In Chinese). "國內銀行業規模經濟、多樣化經濟及效率研究之比較", 1996, 《經濟研究》, 34 : 2 , 111-147, (與陳欽奇合著).
25. "Constructing a Quality-Adjusted Price Index for Computers in Taiwan," 1996, *Taiwan Economic Review*, Vol. 24:4, 557-577, TSSCI, (Coauthored with B.J. Liu and S.Z. Yang) (In Chinese). "電腦價格指數之建立:以台灣電腦產業為例", 1996, 《經濟論文叢刊》, 24:4, 557-577, (與劉碧珍及楊聖璋合著).
26. "Measurement Methods for Technological Change Embodied in Inputs," 1990, *Economics Letters*, Vol. 32:4, 325-330, SSCI & ECONLIT, (Coauthored with J.R. Norsworthy).

## **[B] Books**

1. *Empirical Measurement and Analysis of Productivity and Technological Change: Applications in High Technology and Service Industries*, vol. 211, Contributions to Economic Analysis series, 1992 , D.W. Jorgenson and J.J. Laffont, eds., North-Holland Publishers, (Coauthored with J.R. Norsworthy).
2. *Intermediate Microeconomics: Theory and Applications*, 2006, Yeh Yeh Book Gallery, Taiwan, (Coauthored with J.C. Chen, H.L. Lin and J.R. Chen).

## **[C] Conference full papers**

1. "The Determinants of Taiwanese Biotech Firms' Academic-Industry Research Performance", to be presented in 2015 Annual Conference of Taiwan Economic Association, (coauthored with Mateus Lee).
2. "The Impact of Litigation on the Defendants' Innovation", to be presented

in 2014 Annual Conference of Taiwan Economic Association, (Coauthored with Ting-Hsuan Wu, Shihmin Lo and Mateus Lee).

3. "Searching an Alternative Technology Diversification Measure to the Herfindahl-Hirshman Index", presented in 2013 Asia Pacific Innovation Conference, Taipei, (Coauthored with Yung-Hsu Tsui and Jennifer Chen).
4. "External Knowledge, Tolerable Coordination Costs, and Co-authorship", presented in 2013 Annual Conference of Taiwan Economic Association, CEANA session, (Coauthored with Mateus Lee and Koichi Miyazaki).
5. "Cross-Border Patenting in Emerging Countries: The Cases of China and India", presented in 2013 American Economic Association, CEANA session, submitted to Research Policy, (Coauthored with Tzu-Ya Wang and Jennifer H. Chen).
6. "International Technology Payment and Innovation Efficiency", presented in 2011 Annual Conference on "Money, Economy and Management", submitted to Contemporary Economic Policy. (Coauthored with Che-Jung Hsu, Jason Tzu-Ti Lin, Dar-Zen Chen, and Mu-Hsuan Huang).
7. "Renewable Energy and Electric Power Industry: The Cases of the United States, Germany, Korea and Taiwan", 2011, presented in The 12<sup>th</sup> Annual Conference of Empirical Economics, Hsinchu, Taiwan. (Coauthored with Chungyi Xu).
8. "The Impact of Firm's Innovation from Internal R & D and External Learning: Evidence from Asian LCD firms," 2008, presented in the seminar at National Taiwan University (Coauthored with Yi- Hsiu Lin and Jimmy Lo).
9. "Technological Innovation Network and External Learning: A Latecomer's Perspective" 2008, presented in Annual Conference of the Academy of International Business, Milan, Italy. (Coauthored with Shuwen Wang, Shihmin Lo, Che-Jung Hsu).
10. "How Do Latecomers Catch Up with Forerunners?" 2007, presented in Annual Conference of the Academy of Management, Philadelphia. (Coauthored with Shihmin Lo and Wen-hau Chang).
11. "The Determinants of Innovation Persistency: An Empirical Study on

- Patent Spells of Technology Firms,” 2006, presented in Annual Meeting of the Academy of Management, Georgia, U.S.A., Aug., 2006, (Coauthored with Jennifer Chen and Tony Yang).
12. “Persistence and Technology Proximity of Innovative Activities: A Cross-Country Comparative Analysis,” 2005, presented in the 80th Annual WEA Conference, USA, (Coauthored with Y. T. Tsai and Jennifer Chen).
  13. “The Impact of Industry Structure and Public R&D on Patenting in Taiwan,” 2004, presented in Asian Symposium on Evaluation of National Research Performance, held by National Science Council, Taiwan, (Coauthored with Prof. Simona Sung).
  14. “Public R&D and industrial innovations at the project levels: An exploration of Taiwan’s public research projects”, 2002, the 77th annual conference of WEA, Taipei, (Coauthored with Guo-Gang Huang).
  15. “The Exit Behavior of the Foreign Banks in Taiwan,” 2001, presented at the Proceedings of the Ninth Conference in Memory of Professor Kuo-shu Liang, (Coauthored with H.C. Chuan) (In Chinese).
  16. “Industrial Diversification and Its Impact on Productivity in Taiwan’s Electronics Industry”, 2000, presented in the Taipei International Conference on Industrial Economics, Academia Sinica, (Coauthored with Ming-Hung Weng and Yanzhi Wang).
  17. “Efficiency in the Taiwan Banking Industry,” 1997, presented in the Taipei International Conference on Efficiency and Productivity Growth, Academic Sinica and National Taiwan University, (Coauthored with C.H. Chou).
  18. “The Structure of Production, Technological Change and Productivity Growth: The Case of Telecommunications in Taiwan,” 1995, Conference Proceedings of Research in Industrial Development: the Experience of Taiwan, National Central University, 124-162.
  19. “The Structural Change of the Manufacturing Sector in Taiwan: The Implications on Industrial Policies,” 1994, Conference Proceedings of the Fourth Convention of the East Asian Economic Association, (Coauthored with J.L. Ou, and K.C. Sun).
  20. “Technological Change, Obsolescence, and Depreciation in Telecommunications Services under Different Regulatory Regimes,” 1990,



Conference Proceedings of 12<sup>th</sup> Annual Pacific Telecommunications Conference, (Coauthored with J.R. Norsworthy).

21. “Measuring Product-Specific Markup, Marginal Cost and Return to Capital in the Multiproduct Regulated Enterprise,” 1990, the Conference Proceedings of the Seventh NARUC Biennial Regulatory Information Conference, (Coauthored with J.R. Norsworthy, and P.A. Fauntleroy).

### **[D] Book chapters**

1. “The Impacts of Government Policies on Firm’s Innovative Performance: in Case of Taiwan’s Biotech Firms (政府政策對廠商研發成效的影響：以臺灣生技醫藥廠商為例)” , forthcoming, in H. L. Lin and S.L. Jang eds., *大陸與臺海兩岸關係研究叢書*, National Taiwan University Press, (Coauthored with Man-Jung Kua and Mateus Lee).
2. “China's National Innovative Capacity (中國大陸科學技術實力評估)” , 2014, in H. L. Lin and S.L. Jang eds., *Technological Catch-up and Industrial Development in China (中國大陸技術追趕與產業發展)*, National Taiwan University Press, (Coauthored with Chiao Hui Chang).
3. “Cost Function Estimation of Quality Change Embodied in Inputs: The Use of Semiconductors in Computers and Telecommunications Equipment,” 1993, in M.F. Foss, M.E. Manser and A.H. Young eds., *Price Measurement and Their Uses*, University of Chicago Press for the National Bureau of Economic Research, Chapter 4, 125-155, (Coauthored with J.R. Norsworthy).
4. “Productivity Growth and Technological Change in U.S. Telecommunications Equipment Manufacturing Industries,” 1991, in M.A. Crew ed., *Competition and the Regulation of Utility*, Chapter 7, Kluwer Publishers, 121-139, (Coauthored with J.R. Norsworthy).
5. “Productivity and Cost Measurement for the U.S. Postal Service: Variations Among Regions,” 1991, in M.A. Crew and P. Kleindorser, eds. *Competition and Innovation in Postal Service*, Kluwer Publisher, 141-176, (Coauthored with J.R. Norsworthy and W.M. Shi).

### **[E] Dissertation**

- “Productivity Growth and Technical Change in the U.S. Semiconductors

Computer, and Telecommunications Equipment Industries”, Ph.D. Dissertation, Department of Economics, Rensselaer Polytechnic Institute, Troy, NY., U.S.A. 1987.

### **[F] Working paper & Technical reports**

1. “The Determinants of Taiwanese Biotech Firms’ Academic-Industry Research Performance”, 2015, working paper, (coauthored with Mateus Lee).
2. “To Diversify or Not? --- In Search of An Alternative Technological Diversification Measure”, 2013, working paper, (Coauthored with Yung-Hsu Tsui and Yi-Hsiu Lin).
3. “Examine the Relationship Between Technology Import and Internal R &D: The Evidence of Taiwan’s High-tech Enterprises”, 2013, working paper, (Coauthored with Hsin-Yi Cheng and Li-Ju Chen).
4. “The Effect of Government Policies on Firms’ Innovation: The Case of Taiwan’s biotechnology firms”, 2013, working paper, (coauthored with Men-Jong Kau).
5. “The Impacts of China’s Subsidy Policies and Product Life Cycle on Global Solar Photovoltaic Cell Production”, 2013, working paper, (coauthored with Wei-Lun Lin and Li-Ju Chen).
6. “The Evaluation of X Value in the Price Cap Regulation”, 2009, A Research Report for NCC.
7. “Patents’ Benefit Evaluation and Technology Diffusion,” 2007, A research report for Science & Technology Policy Research and Information Center, STPI, Taiwan.
8. “Price Cap Regulation and Total Factor Productivity Growth,” 2006, a research report for Chung-Hwa Telecommunication Company, Taiwan.
9. “The Models of Regulation Factor (X value) in the Price Cap Regulation,” 2000, a research report for the Directorate General of Telecommunications, Ministry of Transportation and Communications, Taiwan (Coauthored with Y.S. Liu et al.).
10. "The Impacts of Taiwan’s Telecommunications Service Policy Influences the Telecommunications Manufacturing Industry," 2000, a research report for the Industrial Technology Research Institute, Taiwan. (Coauthored with

- L.C. Chen).
11. “A Study of Taiwan's Control on Technology Export to China,” 2000, a research report for the Industrial Technology Research Institute, Taiwan. (Coauthored with G.G. Huang and L.C. Chen).
  12. “The Evaluation of Taiwan Power Company's Productivity and Cost Structure: Comparing with 179 American Power Companies,” 1999, a research report for the National Science Council, Taiwan, (Coauthored with Z.Y. Li).
  13. “Cost Structure and Efficiency Analysis of Taiwan's Public & Private Banks,” 1998, a research report for the National Science Council, Taiwan, (Coauthored with C.S. Chou and M.H. Bai).
  14. “The Evaluation of Management Efficiency and Productivity of Taiwan’s Telecommunications Service Industry: Comparing with the OECD Countries,” 1994, a research report for the National Science Council, Taiwan, (Coauthored with C.C. Lu and M.H. Bai).
  15. “The Effects of Firm Size, Market Structure and Other Determinants on Innovation for Latecomer Economics of Taiwan and South Korea,” working paper, (Coauthored with Simona Sung).
  16. “The Determinants of Industrial Diversification in Taiwan Electronics Industry,” working paper, (Coauthored with Yanzhi Wang).
  17. “Technology Adoption in U.S. Manufacturing: Comparison of Foreign-Associated and Domestic Plants,” working paper, (Coauthored with J.R. Norsworthy).
  18. “The Comparison of Management Efficiency between Mutual Savings Banks and Stock Savings Banks in the U.S.,” working paper (Coauthored with Y.S. Liu and J.R. Norsworthy).

### [G] Press article

1. “自經區將成另個「國中會考」”，2014/6/28，《蘋果日報》，鄭秀玲、陳吉仲。
2. “自經區 誰得利？誰受害？”，2014/6/16，《自由時報》，鄭秀玲、陳吉仲。
3. “我們需要前瞻的產業政策”，2014/5/6，《自由時報》，鄭秀玲著。
4. “四大智庫所為何事”，2014/3/18，《蘋果日報》，鄭秀玲著。
5. “加入 TPP 須先通過服貿，有道理嗎？”，2014/3/9，《自由時報》，鄭秀玲著。
6. “服貿協議外的選擇”，2013/11/27，《蘋果日報》，鄭秀玲著。

7. “服務貿易重傷經濟 應立即中止”，《自由時報》，鄭秀玲著。
8. “NCC 應公開調查蔡衍明濫用媒體資源”，2012/2/14，《蘋果日報》，鄭秀玲、黃國昌、張錦華、林惠玲著。
9. “發展生技產業現在正是時候”，2011/12/15，《蘋果日報》，鄭秀玲著。
10. “系統平台對言論多元有影響嗎”，2011/10/31，《蘋果日報》，張錦華、鄭秀玲、洪貞玲著。
11. “捍衛我們的言論自由”，2011/10/12，《蘋果日報》，鄭秀玲著。
12. “恐怖的跨媒體巨獸”，2011/9/5，《蘋果日報》，鄭秀玲、林惠玲著。
13. “教育部必須切中問題要害”，2010/8/30，《蘋果日報》，鄭秀玲著。
14. “國中教育 揠苗助長”，2010/5/22，《蘋果日報》，鄭秀玲著。