

PROFESSIONAL SERVICES

Referee: American Economic Review, Journal of Development Economics, Journal of International Economics, Journal of Economic Modeling, American Journal of Agricultural Economics, Journal of Comparative Economics, China Economic Review, and others.

Global Trade Analysis Project (GTAP) Research Fellow, 2000 to 2003, 2007 to present

Board of Directors, Chinese Economists Society (CES), 1992-1993

SELECTED PUBLICATIONS

Referee Journal Articles

“Tracing CO2 emissions in global value chain” *Energy Economics* (with Bo Meng, Glen Peter and Meng Li) , 73(2018):24-42.

“Domestic Value-added in China’s Exports and Its distribution by Firm Ownership.” (With Ma Hong and Zhu Kunfu), *Journal of Comparative Economics*, 43(1):3-18, 2015.

"Tracing Value-added and Double Counting in Gross Exports", (with R. Koopman and Shang-jin Wei), *American Economic Review*, 104(2):459-494, 2014.

“Estimating domestic content in exports when processing trade is pervasive.” (with R. Koopman and Shang-jin Wei), 99(1):178-189, *Journal of Development Economics*, 2012.

"Evasion behavior of exporters and importers: Evidence from the U.S.-China trade data discrepancy." (with M. Ferrantino and Xuepeng Liu), *Journal of International Economics*, 86(1):141-157, 2012.

“How Vertically Specialized is Chinese Trade,” (with Judy Dean and K.C. Fang), *Review of International Economics*, 19(4):609-625, 2011.

“The Nature of U.S.-China Trade in Advanced Technology Products," (with M. Ferrantino, R. Koopman and Falan Yinug, *Comparative Economic Studies*, page 1-18, Summer, 2010.

“A Globally Consistent Framework for Reliability-based Trade Statistics Reconciliation in the Presence of an Entrepôt”, (with M. Gehlhar and Shuli Yao), *China Economic Review*, 21(1):161-189, March 2010.

“Accounting for Discrepancies in Bilateral Trade: The Case of China, Hong Kong, and the United States” (with M. Ferrantino), *China Economic Review*, 19(4): 502-520, October 2008.

“A Flexible Mathematical Programming Model to Estimate Interregional Input-Output Accounts.” (with Patrick Canning), *Journal of Regional Sciences* 45(3):539-563, August 2005.

“Options and Impact of China’s Pension Reform – A Computable General Equilibrium Analysis,”

(with Yan Wang, Dianqing Xu and Fan Zhai), *Journal of Comparative Economics* 32(1): 105-127, March 2004.

“WTO Accession, ‘Greater China’ Free Trade Area and Economic Integration across the Taiwan Strait”, *China Economic Review*, 14(3): 316-349, October 2003.

“Impact of China’s WTO Accession on the Patterns of World Trade.” *Journal of Policy Modeling* 25(1): 1-41, January 2003.

“WTO Accession, Rural Labor Migration and Urban Unemployment in China.” (with Zhai Fan), *Urban Studies*, 39(12): 2199-2217, November 2002.

“The Emergence of a ‘Greater China’ and its Impact on World Trade – A Computable General Equilibrium Analysis.” (with Edward Schuh) *Journal of Comparative Economics* 30(3): 531-566, September 2002.

“APEC Open Regionalism and its Impact on U.S. and World Economy.” (with Bill Coyle), *The World Economy*, 25(4): 563-589, April 2002.

“Capturing the Implications of Services Trade Liberalization.” (S. Robinson, and Will Martin), *Economic System Research*, 14(1):3-33, March 2002.

“The Asia Financial Crisis and Global Adjustment: Implications for U.S. Agriculture.” (with W. McKibbin and Bill Coyle), *Japanese Economic Review*, 52(4): 472-491, December 2001.

“The Impact of China’s WTO Accession on Trade and Economic Relations Cross the Taiwan Strait.” *The Economics of Transition*. 9(3): 743-785, November 2001.

“The China Money Puzzle: Will Devaluation of the Yuan Hurt Hong Kong Dollar?” (with Shag-Jin Wei, Ligang Liu and Wing Woo), *China Economic Review, an International Journal*, 11(2):171-188, December 2000.

"The Impact of Economic Integration among Taiwan, Hong Kong and China: A Computable General Equilibrium Analysis." (with Edward Schuh), *Pacific Economic Review*, 5(2):229-262, *Special Issue on Hong Kong Reversion to China*, May 2000.

“The Continuing Asia Financial Crisis - Global Adjustment and Trade.” (with Marcus Noland and S. Robinson) *The Japanese Economy*, 25(5): 70-95, 1999.

"Impact of China's WTO Entry on Labor Intensive Export Market --A Recursive Dynamic CGE Analysis." *The World Economy Volume* 22(3):379-405, May 1999.

"Tariff Reduction, Tax Replacement, and Its Implication for Income Distribution in China." (with Zhai Fan), *Journal of Comparative Economics*, 26(2): 358-387, June 1998.

“Understanding the Determinants of Structural Change in World Food Markets.” (with Bill Coyle, Mark Gehlhar, Thomas Hertel and Wusheng Yu), *American Journal of Agricultural Economics*, 80(5):1052-1062, December 1998.

"The Asian Financial Crisis: Impact on U.S. Agriculture." (with W. McKibbin and Bill Coyle), *Choices*, Fourth Quarter, 1998: 2-7.

"China and Taiwan Access to the World Trade Organization: Implications for U.S. Agriculture and Trade." *Agricultural Economics*, 17(4): 239-264, December 1997.

"The Impact of Opening Direct Trade Across Taiwan Straits." *American Journal of Chinese Studies*, 4(2): 149-184, 1997.

"An Object-oriented Knowledge-based Approach For Formulating Applied General Equilibrium Models." (with James Slagle), *Journal of Economic Dynamics and Control*. 20(1):209-236, December, 1996

"Beyond the Uruguay Round: The Implication of an Asia Free Trade Area." (with Jeffrey Lewis and S. Robinson), *China Economic Review, an International Journal*, 6(1):35-90, Spring, 1995.

"Consumption and Saving Behavior Under Strict and Partial Rationing." (with Jean Kinsey), *China Economic Review, an International Journal*, 4(1):83-100, Spring, 1994.

"Effects of Rationing on the Consumption Behavior of Chinese Urban Households," (with Wen Chern), *Journal of Comparative Economics*. 16(1): 1-26, March 1992.

Wang, Zhi, "The Effects of Rationing on Consumption Behavior of Chinese Urban Households During 1981 - 1987." Winning thesis of AAEA 1990 Outstanding Master Thesis Award. *American Journal of Agricultural Economics*, 73(5):1561, 1991.

Books and Book Chapters

"Technological innovation, supply chain trade, and workers in a globalized world – 2019 *Global Value Chain Development Report*" co-edited with David Dollar, Emmanuelle Ganne and Victor Stolzenburg, The World Trade Organization, April 2019.

"*Measuring and Analyzing the Impact of Global Value-Chains on Economic Development – 2017 Global Value Chain Development Report*" co-edited with David Dollar and Jose Guilherme Reis, The World Bank, July 2017.

Trade in Value-Added — Developing New Measures of Cross Border Trade, co-edited with Aaditya Mattoo and Shangjin Wei, CEPR/World Bank, April 2013.

"Estimating Foreign value-added in Mexico's manufacturing Exports." (with De la Cruz, R. Koopman, and Shangjin Wei), chapter 8 in Yin-Wong Cheung and Frank Westermann eds. *Global Interdependence, Decoupling and Recoupling- An overview*, MIT Press, October, 2013.

"Is Precocious Export Sophistication a Source of China's Growth Success? Computing the Share of Domestic Value Added in Exports When Processing Trade Is Prevalent." (with R. Koopman and Shangjin Wei), chapter 13 in *Advances in Economics and Econometrics, Volume 2, Applied Economics, Tenth World Congress, Econometric Society Monographs* (No. 50), pp. 519-531, May 2013.

["The Implications of China-Taiwan Economic Liberalization."](#) (with Daniel Rosen), Peterson Institute of International Economics, Washington DC, January, 2011.

"A World Factory in Global Production Chains: Estimating Imported Value Added in Exports by the People's Republic of China," with R. Koopman and Shangjin Wei), in Robert Barro and Jong-Wha Lee, eds, *Costs and Benefits of Economic Integration in Asia*, Oxford University Press, 2011.

"What accounts for the Raising Sophistication of China's Exports?," (with S. Wei), in R. Feenstra and Shangjin. Wei, *China's Growing Role in World Trade*, Chicago: NBER and University of Chicago Press, March 2010.

"The Chinese Export Bundles: Patterns, Puzzles, and Possible Explanations," (with Shangjin Wei), in Eichengreen, Barry and Poonam Gupta, and Rajiv Kumar, " Emerging Giants: China and India in the World Economy" Oxford: Oxford University Press, 2010.

"Implications of WTO Accession for Poverty in China" (with Thomas Hertel and Fan Zhai), Chapter 16 in Deepark Bhattasali, Shantong Li and Will Martin eds. "China and The WTO – Accession, Policy Reform, and Poverty Reduction Strategies" World Bank and Oxford University Press, 2004.

"Impact on the U.S. and Other Economies." Chapter 10 in Shang-Jin WEI, James G. WEN, and Huizhong ZHOU eds. *The Globalization of the Chinese Economy*. Edward Elgar Publishing, 2002, pp.155-89.

"The Road to Economic Recovery in Asia -- A Recursive Dynamic CGE Analysis." in Yu ZhongXian and Danel Xu eds. "*From Crisis to Recovery – Is East Asia Rising Again?*" World Scientific Publishing, 2001, pp. 429-71.

"WTO: China and the World." (in Chinese, with Shan-tong Li, Fan Zhai , and Lin Xu), China Development Press, 2000.

"The efficiency and Distribution Effects of China's Pension Reform." Chapter 6 in Yin Jason Z. and Dianqing Xu eds. "*China's Social security system Reform*" (with Dianqing Xu and Yan Wang). World Scientific Publishing, 1999.

"Global Economic Effects of the Asian Currency Devaluations." (with Marcus Noland, Li-Gang Liu, and Sherman Robinson), Institute of International Economics, Washington DC, July, 1998.

The Arab Economy, the Uruguay Round Predicament and the European Union Wild-Card --an Economy-wide Analysis." in Nemat Shafik eds. *Prospects for Middle Eastern and North African Economies From" Boom to Bust and Back ?* (With Diwan, Isac, Chang-Po Yang), Macmillan Press LTD, London, 1998. pp. 47 - 95.

"The Trade Triangle in East Asia." Chapter 9 in Dijck, Pitou van and Gerrit Faber eds. *The Challenges to the New World Trade Organization*. Kluwer Law International, the Hague, Netherlands, 1996. pp. 177 - 200.

US Government Publications:

"Small and Medium-Sized Enterprises: Characteristics and Performance" USITC Publication 4189, November 2010. (one of the Principal Authors).

"The Service Sector: Its Role in World Food Production & Trade" *Agricultural Outlook*, USDA pp. 21-25, August 2002 (with Bill Coyle).

"APEC Open Food System: the Opportunity for US Agriculture." *Agricultural Outlook*, USDA pp. 18-20, October 2001 (with Bill Coyle).

"The Impact of Distance on U.S. Agricultural Exports -- An Econometric Analysis." (with Bill Coyle, Mark Gehlhar, and Tom Vollrath). In Coyle William and Nicole Ballenger eds. "Technological Changes in the Transportation Sector – Effects on U.S. Food and Agricultural Trade" Miscellaneous publication No. 1566, U. S. Department of Agriculture, Economic Research Service, 2000, pp 78-91.

"Assessment of the Economic Effects on the United States of China's Accession to the WTO", USITC Publication 3229, September, 1999. (one of the Principal Authors).

"Economic Integration and Open Regionalism in APEC: the Gains for U.S. Agriculture." (with Bill Coyle), in Burfisher, Mary and Elizabeth Jones eds. *Regional Trade Agreements and U.S. Agriculture*, U.S. Department of Agriculture, Economic Research Service, AER, October 1998.

"China's Aquatic Economy: Production, Marketing, Consumption and Foreign Trade." in Crook, F. ed. *International Agriculture and Trade Reports: China, Situation and Outlook Series*. U.S. Department of Agriculture, Economic Research Service, WRS-98-3, September 1998, pp.44-50.

"WTO Accession for China and Taiwan: Potential Trade Impacts." *Agricultural Outlook*, USDA pp. 18-21, July 1997, (with Lopez Michael).

The Impact of China and Taiwan Joining the World Trade Organization on U.S. and World Agricultural Trade: A computable General Equilibrium Analysis." Technical Bulletin 1858, Commercial Agricultural Division, Economic Research Service, U.S. Department of Agriculture. May 1997.

Working Papers and Other Publications:

"Measures of Participation in Global Value Chains and Global Business Cycles" (with Shang-Jin Wei, Xinding Yu, and Kunfu Zhu, 2017, NBER Working Paper No. 23222.

"Tracing Greenhouse Gas Emissions in Global Value Chains" (with Bo Meng and Glen Peters) SCID Working paper 525, Stanford University, April, 2015

"The Domestic Segment of Global Supply Chains in China under State Capitalism" (with Heiwai Tang and Wang Fei). Policy Research Working paper 6960, The World Bank, July 2014.

"Quantifying International Production Sharing at the Bilateral and Sector Levels" (With Shang-jin Wei and kunfu Zhu). NBER Working Paper 19677, November, 2013.

"Domestic Value-added in China's Exports and Its distribution by Firm Ownership." (With Ma Hong and Zhu Kunfu) Office of Economics Working Paper No. 2013-05-A, U.S. International Trade Commission.

"Estimating Foreign value-added in Mexico's manufacturing Exports." (with De la Cruz, R. Koopman, and Shangjin Wei), Office of Economics Working Paper No. 2011-04-A, U.S. International Trade Commission.

"Give Credit Where Credit Is Due: Tracing Value Added in Global Production Chains," (with R. Koopman, Bill Powers and Shangjin Wei), NBER Working Paper 16426, September, 2010.

"Does a Leapfrogging Growth Strategy Raise Growth Rate? Some International Evidence", (with Shang-Jin Wei and Anna Wong), NBER Working Paper 16390, September, 2010.

"How much Chinese exports is really made in China – Assessing foreign and domestic value-added in gross exports," (with R. Koopman and Shangjin Wei), Office of Economics Working Paper No. 2008-03-B, U.S. International Trade Commission.

"Classification and Statistical Reconciliation of Trade in Advanced Technology Products: The Case of China and the United States" (with M. Ferrantino, R. Koopman, Falan Yinug Ling, Chen Fengjie Qu and Haifeng Wang), Working paper, No. WP20070906EN, Brookings-Tsinghua Center for Public Policy, Beijing, China. http://www.brookings.edu/papers/2008/spring_china_btc.aspx

"Reconciling Trade Statistics from China, Hong Kong and Their Major Trading Partners-- A Mathematical Programming Approach" with M. Gehlhar and Shuli Yao), GTAP Technical Paper No. 27 September 2007, Center for Global Trade Analysis, Purdue University.

"A Flexible Modeling Framework to Estimate Interregional Trade Patterns and Input-Output Accounts", (with Patrick Canning). Policy Research Working Paper 3359, The World Bank, June 2004.

"Winners and Losers of China's WTO Entry." (with Jun Ma), *The China Business Review*, 28(2):22-25, March-April 2001.

"Implicit Pension Debt, Transitional Cost, Options and impact of China's Pension Reform: A Computable General Equilibrium Analysis." (with Yan Wang, Dingqing Xu, and Fan Zhai), Policy Research Working Paper 2555, The World Bank, World Bank institute, February 2001.

"The Continuing Asian Financial Crisis: Global Adjustment and Trade." (with Marcus Noland and Sherman Robinson), Working Paper Series, No. 99-4, Institute for International Economics, Washington DC, March 1999.

"The G-cubed (Agriculture) Model: A tool for Analyzing Agriculture in a Globalizing World." (with Warwick McKibbin), Brookings Discussion Paper in International Economics, No. 139, Brookings Institution, Washington D.C., June 1998.

"Asian Competitive Devaluations." (with Li-Gang Liu, Marcus Noland, and Sherman Robinson), Working Paper Series, No. 98-2, Institute for International Economics, Washington DC, January 1998.

"The Global Economic Effects of the Japanese Crisis." (with Marcus Noland and Sherman Robinson), Working Paper Series, No. 98-6, Institute for International Economics, Washington DC, September 1998.

“The Impact of Joining WTO on Trade Relationship across Taiwan Straits.” Economic Report, Chung-Hwa Institute for Economic Research, September 1998, Taipei, Taiwan (in Chinese).

“The Global and Domestic Impact of China Joining the World Trade Organization.” (with Fan Zhai and Shantong Li), Washington Center for China Studies and Development Research Center, the State Council, People’s Republic of China, December 1998.

Papers Published in Chinese Professional Journals:

“The Implicit Debt, Transition Cost, Reform Forms and the Influence of China’s Pension System” *Economic Research Journal*, No. 5(2001): 3-12.

Economic Results of Direct Trade between Mainland and Taiwan, *Quantitative and Technical Economics* No.5 (1998): 29-35.

Impact of China's WTO Accession on Labor Intensive Exports and Implications for U.S. Agricultural Trade -- A Recursive Dynamic CGE Analysis. *Economic Research Journal*, No. 4(1997): 54-65.

Rationing System, Consumption and Saving Behavior of Chinese Urban households, *Economic Research Journal*, No. 8(1995): 57-68.

Econometric Model for Food Demand and Its Application in Beijing, *System Engineering -- Theory and Practice*, No. 6(1989): 67-72.

An Estimation Method for the Parameters of Leslie Matrix Model and Its Computer Program, *Computer Application in Agriculture*, No.1(1987):26-31.

An Optimization Model for the Structure of Meat Supply in Beijing, *Quantitative and Technical Economics*, No.8(1987):46-54.

Microcomputer Application in a Short Run Regional Population Forecasting, *Computer Application in Agriculture*, No.1(1986):51-54.

A Mathematical Model System for Dairy Goat Development Planning, *System Engineering*, No.3(1985):25-35.

Shadow Price and Its Role in Optimization of Economic System, *Quantitative and Technical Economics*, No. 10(1985):14-22.

HONORS AND AWARDS

- 2014: Peikang Chang Development Economics Award (with Koopman and Shang-jin Wei)
- 2012:Distinguished service award, U.S. International Trade Commission
- 2005: Cash in your account award for contribution to develop method of estimating structural distribution of statistical discrepancy in U.S. national accounts, U.S. Bureau of Economic Analysis
- 2002: SunYe-Fang Economic Science Price (with Yan Wang, Dianqing Xu and Fan Zhai)
- 2001: USDA Certificate of Merit for an innovative trade model supporting WTO negotiations
- 1999: Research grant from Research Committee of the World Bank (with Yan Wang and Fan Zhai)

- 1998: Best Paper Award, Chinese Economists Society
- 1997: Research grant from Ford foundation (Managed by Washington Center for China Studies)
- 1993: Honor member of Chinese Economists Society (CES)
- 1992: MacArthur Interdisciplinary Program Pre-dissertation Award
- 1990: Outstanding Master Thesis Award, American Agricultural Economics Association.

CONFERENCES ORGANIZED

- 2016: "Making Global Value-Chains Work for Economic Development and Shared Prosperity - *Global Value Chain Development Report Background Paper Conference*" DiaoYuTai Hotel, Beijing, March 17-18.
- 2015: "Global Value-Chain Training and Research Workshop", July 12 to July 18, University of International Business and Economics, Beijing, China.
- 2014: "Global Value-Chain Training and Research Workshop", June 30 to July 11, University of International Business and Economics, Beijing, China.
- 2013: "Global Value Chains and Structural Adjustments", Jun 24-26, Tsinghua University, Beijing, China; "The 16th annual conference of Global Trade Analysis", June 12-14, Shanghai, China.
- 2011: "The Fragmentation of Global Production and Trade in Value-Added - Developing New Measures of Cross Border Trade" Jun 9-10, the World Bank, Washington DC.
- 2010: "Development and Use of Applied General Equilibrium Model Dynamic Baselines for Policy Analysis", Jun14-15, Shanghai WTO Affairs Consultation Center, Shanghai, China.
- 2009: "U.S.-China Advanced Technology Trade and Industrial Development " Oct. 23-24, Tsinghua University, Beijing, China.
- 2007: "China's Increasingly High Technology Trade", Sept. 26, Carnegie Endowment and the Brookings Institution. Washington DC.
- 2006: "How much Does China Trade with the World? - Puzzles from Discrepancies in Bilateral Trade data and Production Fragmentation", Oct. 24, National Bureau of Statistics, Beijing, China.

EDUCATION

Ph.D, November 1994, Applied Economics with minor in computer and information sciences, University of Minnesota, Minneapolis.

M.S., June 1990, Agriculture Economics and Rural Sociology, Ohio State University, Columbus, Ohio. AAEA outstanding thesis award, 1990.

M.S., January 1985, Agricultural System Engineering, Chinese Academy of Agricultural Sciences.