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## **Michael T. Owyang**

Senior Economics Policy Advisor

**Joined the Bank**      October 2000

### **Education**

2000	PhD Economics, University of California, San Diego
1996	M.A. Economics, University of California, San Diego
1992	B.A. Economics, University of California, Berkeley
1992	B.S. Mechanical Engineering, University of California, Berkeley

**Areas of Interest**      Econometrics, Forecasting

### **Previous Experience**

2011-present	Adjunct Professor, University of North Carolina, Chapel Hill
2014-2022	Assistant Vice President, Federal Reserve Bank of St. Louis
2006-2014	Research Officer, Federal Reserve Bank of St. Louis
2004-2006	Senior Economist, Federal Reserve Bank of St. Louis
2000-2004	Economist, Federal Reserve Bank of St. Louis

### **Journal Publications**

“Reconsidering the Fed’s Forecasting Advantage” with Amy Y. Guisinger and Michael W. McCracken, Federal Reserve Bank of St. Louis Working Paper 2021-001A forthcoming at the *Journal of Money, Credit, and Banking* (October 2023)

“Age and Gender Differentials in Unemployment and Hysteresis” with Amy Y. Guisinger and Laura E. Jackson, Federal Reserve Bank of St. Louis Working Paper 2021-015A, forthcoming at *Studies in Nonlinear Dynamics and Econometrics*

“Industrial Connectedness and Business Cycle Comovements” with Amy Guisinger and Daniel Soques, *Econometrics and Statistics*, January 2024, Vol. 29, pp. 132-149.

“A Time-Varying Threshold STAR Model with Applications” with Michael Dueker, Laura E. Jackson, and Martin Sola, *Oxford Open Economics*, 2023, Vol. 2, pp. 1-12.

“Forecasting Low Frequency Macroeconomic Events with High Frequency Data” with Ana B. Galvão, *Journal of Applied Econometrics*, Nov/Dec 2022, 37(7), pp. 1314-1333.

“FRED-SD: A Real-Time Database for State-Level Data with Forecasting Applications” with Kathryn O. Bokun, Laura E. Jackson, and Kevin L. Kliesen, *International Journal of Forecasting*, Jan-Mar 2023, 39(1), pp. 279-297.

“Business Cycles Across Space and Time” with Neville Francis and Daniel Soques, *Journal of Money, Credit, and Banking*, June 2022, 54(4), pp. 921-952.

“Binary Conditional Forecasts” with Michael W. McCracken and Joseph McGillicuddy, *Journal of Business and Economic Statistics*, June 2022, 40(3), pp. 1246-1258.

“Contagious Switching” with Jeremy Piger and Daniel Soques, *Journal of Applied Econometrics*, March 2022, 37(2), pp. 415-432.

“Forecasting Using Large Bayesian VARs with Blocking” with Michael W. McCracken and Tatevik Sekhposyan, *International Journal of Central Banking*, December 2021, 17(5), pp. 327-367.

“The Nonlinear Effects of Uncertainty Shocks” with Laura E. Jackson and Kevin L. Kliesen, *Studies in Nonlinear Dynamics and Econometrics*, September 2020, Vol. 24, No. 4.

“International Stock Comovements with Endogenous Clusters” with Laura Coroneo and Laura E. Jackson, *Journal of Economic Dynamics and Control*, August 2020, 116, pp. 1-19.

“Asymmetry, Complementarities, and State Dependence in Federal Reserve Forecasts” with Julieta Caunedo, Riccardo DiCecio, and Ivana Komunjer, *Journal of Money, Credit, and Banking*, February 2020, 52(1), pp. 205-228.

“How Has Empirical Monetary Policy Analysis Changed After the Financial Crisis?” with Neville Francis and Laura E. Jackson, *Economic Modeling*, January 2020, 84(1), pp. 309-321.

“Nonlinearities, Smoothing and Countercyclical Monetary Policy” with Laura E. Jackson and Daniel Soques, *Journal of Economic Dynamics and Control*, October 2018, 95, pp. 136-154.

“Financial Stress Regimes and the Macroeconomy” with Ana Beatriz Galvao, *Journal of Money, Credit, and Banking*, October 2018, 50(7), pp. 1479-1505.

“Monetary and Fiscal Shocks in a Currency Area with Sovereign Debt Crises: A Structural FAVAR Approach” with Laura E. Jackson and Sarah Zubairy, *Journal of Economic Dynamics and Control*, August 2018, 93, pp. 67-91.

“Countercyclical Policy and the Speed of Recovery after Recessions” with Neville Francis and Laura E. Jackson, *Journal of Money, Credit, and Banking*, June 2018, 50(4), pp. 675-704.

“A State-Level Analysis of Okun’s Law” with Amy Guisinger, Ruben Hernandez-Murillo, and Tara Sinclair, *Regional Science and Urban Economics*, January 2018, 68, pp. 239-248.

“An Endogenous Clustered Factor Approach to International Business Cycles” with Neville Francis and Ozge Savascin, *Journal of Applied Econometrics*, November/December 2017, 32(7), pp. 1261-1276.

“Clustered Housing Cycles” with Ruben Hernandez-Murillo and Margarita Rubio, *Regional Science and Urban Economics*, September 2017, 66, pp. 185-197.

“Did Affordable Housing Legislation Contribute to the Subprime Securities Boom?” with Andra Ghent and Ruben Hernandez-Murillo, *Real Estate Economics*, Winter 2015, 43(4), pp. 820-854.

“Forecasting Recessions Using State-Level Data” with Jeremy M. Piger and Howard J. Wall, *Journal of Money, Credit, and Banking*, August 2015, 47(5), pp. 847-866.

“Racial Discrimination in Subprime Lending” with Andra Ghent and Ruben Hernandez-Murillo, *Regional Science and Urban Economics*, September 2014, 48, pp. 199-215.

“A Flexible, Finite-Horizon Approach for Identifying Technology Shocks” with Neville Francis, Jennifer E. Roush, and Riccardo DiCecio, *Review of Economics and Statistics*, October 2014, 96(4), pp. 638-647.

“Where is an Oil Shock?” with Kristie M. Engemann and Howard J. Wall, *Journal of Regional Science*, March 2014, 54(2), pp. 169-185.

“Regional Variations in the Response to Government Spending Shocks” with Sarah Zubairy, *Regional Science and Urban Economics*, May 2013, 43(3), pp. 445-64.

“Discordant City Employment Cycles” with Jeremy Piger and Howard J. Wall, *Regional Science and Urban Economics*, March 2013, 43(2), pp. 367-84.

“Multivariate Forecast Evaluation and Rationality Testing” with Ivana Komunjer, *Review of Economics and Statistics*, November/December 2012, 94(4), pp. 1066–1080.

“The Propagation of Regional Business Cycles” with James D. Hamilton, *Review of Economics and Statistics*, November/December 2012, 94(4), pp. 935–947.

“The Local Effects of Monetary Policy” with Neville Francis and Tatevik Sekhposyan, Berkeley Electronic Press: *Advances in Macroeconomics*, 2012, 14(2).

“Oil Price Shocks and the Business Cycle: International Evidence” with Kristie M. Engemann and Kevin Kliesen, *Macroeconomics Dynamics*, 2011, 15(S3), pp. 498-517.

“Whatever Happened to the Business Cycle? A Bayesian Perspective on Jobless Recoveries” with Kristie M. Engemann, *Macroeconomic Dynamics*, 2010, 14(5), pp. 709-726.

“Is Housing the Business Cycle? Evidence from U.S. Cities” with Andra Ghent, *Journal of Urban Economics*, 2010, 67(3), pp. 336-51.

“Regional VARs and Channels of Monetary Policy” with Howard J. Wall, *Applied Economics Letters*, August 2009, 16(12), pp. 1191-94.

“States and the Business Cycle” with David Rapach and Howard J. Wall, *Journal of Urban Economics*, March 2009, 65(2), pp. 181-94.

“Identifying Asymmetries the Beige Book: A MIDAS Approach” with Michelle T. Armesto; Ruben Hernandez-Murillo; and Jeremy Piger, *Journal of Money, Credit, and Banking*, February 2009, 41(1), pp. 35-55.

“A State-Level Analysis of the Great Moderation” with Jeremy Piger and Howard J. Wall, *Regional Science and Urban Economics*, November 2008, 38(6), pp. 578-589.

“Explaining City Growth Rates: A Markov-Switching Approach” with Jeremy Piger; Howard J. Wall;

and Christopher Wheeler, *Journal of Urban Economics*, November 2008, 64(3), pp. 538-550.

“Searching for Better Prospects: Endogenizing Falling Job Tenure and Private Pension Coverage” with Leora Friedberg and Tara Sinclair, Berkeley Electronic Press, Topics in Economic Policy and Analysis, 2006, 6(1), Article 14.

“The Information Content of Regional Employment for Forecasting Aggregate Conditions” with Ruben Hernandez-Murillo, *Economics Letters*, March 2006, 90(3), pp. 335-9.

“What Explains the Varying Monetary Response to Technology Shocks in G-7 Countries?” with Neville Francis and Athena T. Theodorou, *International Journal of Central and Banking*, December 2005, 1(3), pp. 33-71.

“Business Cycle Phases in U.S. States” with Jeremy Piger and Howard J. Wall, *Review of Economics and Statistics*, November 2005, 87(4), pp. 604-16.

“Monetary Policy in a Markov-Switching VECM: Implications for the Cost of Disinflation and the Price Puzzle” with Neville Francis, *Journal of Business and Economic Statistics*, July 2005, 23(3), pp. 305-13.

“Regime Switching and Monetary Policy Measurement” with Garey Ramey, *Journal of Monetary Economics*, November/December 2004, 51(8), pp. 1577-1598.

### **Working Papers**

“Impulse Response Functions for Self-Exciting Nonlinear Models” with Neville Francis and Daniel Soques, Federal Reserve Bank of St. Louis Working Paper 2023-021A.

“Regional Beveridge Curves” with Hannah Shell and Daniel Soques, Federal Reserve Bank of St. Louis Working Paper 2022-037A.

“Tax Progressivity, Economic Booms, and Trickle-Up Economics” with Laura E. Jackson and Christopher Otrok, Federal Reserve Bank of St. Louis Working Paper 2019-034A.

### **Articles in Federal Reserve Bank of St. Louis Publications**

“On the Relative Performance of Inflation Forests” with Julie K. Bennett, Federal Reserve Bank of St. Louis *Review*, Second Quarter 2022, 104(2).

“Regional Gasoline Price Dynamics” with Julie K. Bennett and E. Katarina Vermann, Federal Reserve Bank of St. Louis *Review*, Third Quarter 2021, 103(3), pp 289-314.

“Economic Forecasting: Comparing the Fed with the Private Sector” with Hannah G. Shell, Federal Reserve Bank of St. Louis *The Regional Economist*, Third Quarter 2019, Vol. 27, No. 3.

“Dealing with the Leftovers: Residual Seasonality in GDP” with Hannah G. Shell, Federal Reserve Bank of St. Louis *The Regional Economist*, Fourth Quarter 2018, Vol. 26, No. 4.

“Measuring Potential Output” with Amy Guisinger and Hannah G. Shell, Federal Reserve Bank of St. Louis *Review*, Fourth Quarter 2018, 100(4), pp 297-316.

“Measuring China’s GDP” with Hannah G. Shell, Federal Reserve Bank of St. Louis, *The Regional Economist*, April 2017, 25(2), pp. 4-8.

“How Do Local Labor Markets Affect Retirement” with Leora Friedberg, Wei Sun, and Anthony Webb,

Federal Reserve Bank of St. Louis *Review*, Third Quarter 2016, 99(3), pp. 259-278.

“Measuring Trends in Income Inequality” with Hannah G. Shell, Federal Reserve Bank of St. Louis, *The Regional Economist*, April 2016, 24(2), pp. 10-11.

“Does The United States Lead Foreign Business Cycles?” with Neville Francis and Daniel Soques, Federal Reserve Bank of St. Louis *Review*, Second Quarter 2015, 97(2), pp. 133-58.

“A Measure of Price Pressures” with Laura E. Jackson and Kevin L. Kliesen, Federal Reserve Bank of St. Louis *Review*, First Quarter 2015, 97(1), pp. 25-52.

“International Business Cycles” with Diana A. Cooke, M. Ayhan Kose, and Christopher Otrok, Federal Reserve Bank of St. Louis, *The Regional Economist*, April 2015, 23(2), pp. 5-9.

“Assessing the Link Between Gasoline and Oil Prices: Still Rocket Science?” with Kate Vermann, Federal Reserve Bank of St. Louis, *The Regional Economist*, October 2014, 22(4), pp. 5-9.

“Output and Unemployment: How Do They Relate Today?” with Kate Vermann and Tatevik Sekhposyan, Federal Reserve Bank of St. Louis, *The Regional Economist*, October 2013, 21(4), pp. 5-9.

“Measuring the Effect of School Choice on Economic Outcomes” with Kate Vermann, Federal Reserve Bank of St. Louis, *The Regional Economist*, October 2012, 20(4), pp. 5-9.

“Disentangling Diverse Measures: A Survey of Financial Stress” with Kevin L. Kliesen and Kate Vermann, Federal Reserve Bank of St. Louis *Review*, September/October 2012, 94(5), pp. 369-398.

“Okun's Correlation Over the Business Cycle: Was the Great Recession All that Different?” with Tatevik Sekhposyan, Federal Reserve Bank of St. Louis *Review*, September/October 2012, 94(5), pp. 399-419.

“Measuring School Quality” with Kate Vermann, Federal Reserve Bank of St. Louis, *The Regional Economist*, October 2012, pp. 4-8.

“Where There Isn't Smoke, There May Still Be Fire: The Link between 100-Percent Smoking Bans and Smoking Behavior” with Kate Vermann, Federal Reserve Bank of St. Louis *Review*, July/August 2012, 94(4), pp. 265-286.

“Worth Your Weight? The Connection Between Obesity and Wages” with Kate Vermann, Federal Reserve Bank of St. Louis, *The Regional Economist*, October 2011, pp. 16-17.

“Patterns of Interstate Migration in the United States from the Survey of Income and Program Participation” with Ruben Hernandez-Murillo, Lesli Ott, and Denise Whalen, Federal Reserve Bank of St. Louis *Review*, May/June 2011, 93(3), pp. 169-186.

“Unconventional Oil Production: Stuck in a Rock and a Hard Place” with Kristie M. Engemann, Federal Reserve Bank of St. Louis, *The Regional Economist*, July 2010, pp. 12-13.

“Forecasting using Data with Mixed Frequencies” with Kristie M. Engemann and Michelle Armesto, Federal Reserve Bank of St. Louis *Review*, November/December 2010, 92(6), pp. 521-36.

“Nonlinear Hedonics and the Search for School District Quality” with Abbigail J. Chiodo and Rubén Hernández-Murillo, Federal Reserve Bank of St. Louis *Review*, May/June 2010, 92(3), pp. 185-204.

“Sports as a Natural Experiment” with Kristie M. Engemann, Federal Reserve Bank of St. Louis, *The Regional Economist*, January 2009, pp 10-13.

“Forecasting with Disaggregate Series in the Federal Reserve's Eighth District” with Kristie M.

Engemann and Ruben Hernandez-Murillo, Federal Reserve Bank of St. Louis *Regional Economic Development*, October 2008, 4(1), pp. 15-29 (reprinted in Federal Reserve Bank of St. Louis Review, May/June 2011, 93(3), pp. 207-222.)

“Extra Credit: The Rise of Short Term Liabilities” with Kristie M. Engemann, Federal Reserve Bank of St. Louis, *The Regional Economist*, April 2008, pp 10-11.

“A Primer on the Effects of Fiscal Policy Shocks in a VAR framework” with Kristie M. Engemann and Sarah Zubairy, Federal Reserve Bank of St. Louis *Review*, March/April 2008, 90(2) pp 117-132.

“Splitsville: The Economics of Divorce” with Kristie M. Engemann, Federal Reserve Bank of St. Louis, *The Regional Economist*, January 2008, pp. 4-7.

“The Evolution of Labor Force Participation” with Riccardo DiCecio, Kristie M. Engemann, and Christopher H. Wheeler, Federal Reserve Bank of St. Louis *Review*, January/February 2008, 90(1), pp. 47-62.

“Working Hard or Hardly Working? The Evolution of Leisure Time in the United States” with Kristie M. Engemann, Federal Reserve Bank of St. Louis, *The Regional Economist*, January 2007, pp. 10-11.

“Can Changes in the Intra-marital Relationship Explain the Rise in Female LFP Since WW2?” with Kristie M. Engemann, Federal Reserve Bank of St. Louis, *The Regional Economist*, April 2006, pp. 10-11.

“What’s in a Name? Re-examining Conflicting Evidence on Ethnic Names” with Kristie M. Engemann, Federal Reserve Bank of St. Louis, *The Regional Economist*, January 2006, pp 10-11.

“The 2001 Recession Experiences of the Federal Reserve’s Eighth District States” with Jeremy Piger and Howard J. Wall, Federal Reserve Bank of St. Louis *Regional Economic Development*, 2005, 1(1), pp. 3-16.

[“Editor’s Introduction: Productivity, Labor, and the Business Cycle — The 29th Annual Economic Policy Conference”](#) Federal Reserve Bank of St. Louis *Review*, July/August 2005, 87(4), pp. 429-34.

“So Much for that Merit Raise: Examining the Link Between Wages and Appearance” with Kristie M. Engemann, Federal Reserve Bank of St. Louis, *The Regional Economist*, April 2005, pp. 10-11.

[“Do Consumer Sentiment Indices Predict Regional Retail Sales?”](#) with Thomas A. Garrett and Ruben Hernandez-Murillo, Federal Reserve Bank of St. Louis *Review*, March/April 2005, 87(2, Part 1), pp. 123-35.

“Keep Your Resume Current: The Causes Behind Declining Job Tenure” with Kristie M. Engemann and Leora Friedberg Federal Reserve Bank of St. Louis, *The Regional Economist*, January 2005, pp. 5-9.

[“Subjective Probability: Psychological Theories and Economic Applications”](#) with Abbigail J. Chiodo, Massimo Guidolin, and Makoto Shimoji, Federal Reserve Bank of St. Louis *Review*, January/February 2004, 86(1), pp. 33-47.

[“The Use of Long-Run Restrictions for the Identifying of Technology Shocks”](#) with Neville Francis and Athena T. Theodorou, Federal Reserve Bank of St. Louis *Review*, November/December 2003, 85(6), pp. 53-66.

[“Marriage, Motherhood and Money: How Do Women's Life Decisions Influence Their Wages?”](#) with Abbigail J. Chiodo, Federal Reserve Bank of St. Louis, *The Regional Economist*, April 2003, pp. 5-9.

[“Monetary Policy; The Whole County Gets the Same Treatment, But Results Vary”](#) with Abbigail J. Chiodo, Federal Reserve Bank of St. Louis, *The Regional Economist*, January 2003, pp. 12-13.

[“A Case Study of a Currency Crisis: The Russian Default of 1998”](#) with Abbigail J. Chiodo, Federal Reserve Bank of St. Louis *Review*, November/December 2002, 84(6), pp. 7-17.

[“For Love or Money: Examining the Marriage Wage Premium”](#) with Abbigail J. Chiodo, Federal Reserve Bank of St. Louis, *The Regional Economist*, April 2002, pp. 10-11.

[“Not Your Father's Pension Plan: The Rise of 401\(K\) and Other Defined Contribution Pension Plans”](#) with Leora Friedberg Federal Reserve Bank of St. Louis *Review*, January/February 2002, 84(1), pp. 23-34.

[“Persistence, Excess Volatility, and Volatility Clusters in Inflation”](#) Federal Reserve Bank of St. Louis *Review*, November/December 2001, 83(6), pp. 41-52.

[“Low Unemployment: Old Dogs or New Tricks”](#) with Abbigail J. Chiodo, Federal Reserve Bank of Saint Louis, *The Regional Economist*, October 2001, pp. 10-11.