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Joined the Bank Staff May, 2011

Ph.D. Economics

The University of Iowa

1989

M.S. Economics

Carnegie Mellon University

1985

M.S. Industrial Engineering

Education National Institute for Training in Industrial Engineering

1983

B.E. Electrical Engineering Indian Institute of Science, India

1981

B.S. Physics

University of Bombay, India

1978

Areas of Interest Macroeconomics, Economic development, Income distribution, Public finance

Previous Experience

2018-present	Senior Vice President, Research Division, Federal Reserve Bank of St. Louis
2015-2016	Professor of Economics, Arizona State University (on leave from the Federal Reserve Bank of St. Louis)
2011-2018	Vice President, Research Division, Federal Reserve Bank of St. Louis
2011-present	Visiting Professor of Economics, Washington University in St. Louis
2002-2011	Henry B. Tippie Research Professor of Economics, University of Iowa
2000-2001	Professor of Economics, Pennsylvania State University
1996-2000	Associate Professor of Economics, University of Iowa
1995-1996	Associate Professor of Economics, University of Virginia
1995-1996	Visiting Associate Professor of Economics, University of Iowa
1989-1995	Assistant Professor of Economics, University of Virginia

Journal Publications

"Majority Voting in a Model of Means Testing," with Buly A. Cardak and Gerhard Glomm, *European Economic Review*, February 2020, Vol. 122, Article 103351.

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"Optimal Auditing and Insurance in a Dynamic Model of Tax Compliance," with Yuzhe Zhang, *Theoretical Economics*, May 2012, Vol. 7, No. 2, pp. 241-282.

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"The Return to Capital and the Business Cycle," with Paul Gomme and Peter Rupert, *Review of Economic Dynamics*, April 2011, Vol. 14, No. 2, pp. 262-78.

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"A Generalized Volatility Bound for Dynamic Economies," with Christopher Otrok and Charles Whiteman, *Journal of Monetary Economics*, November 2007, Vol. 54, No. 8, pp. 2269-90.

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"Public Education and Income Inequality," with Gerhard Glomm, *European Journal of Political Economy*, June 2003, Vol. 19, No. 2, pp. 289-300.

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"Habit Formation: A Resolution of the Equity Premium Puzzle?" with Christopher Otrok and Charles Whiteman, *Journal of Monetary Economics*, September 2002, Vol. 49(6), pp. 1261-88. Publisher DOI: https://www.sciencedirect.com/science/article/pii/S0304393202001472

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"Growth and Risk-Sharing with Private Information," with Aubhik Khan, *Journal of Monetary Economics*, June 2001, Vol. 47, No. 3, pp. 499-521.

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Working Papers

"Technology adoption, mortality, and population dynamics," with John Hejkal and Guillaume Vandenbroucke, Federal Reserve Bank of St. Louis Working Paper 2020-039F, June 2023.

"TFP, Capital Deepening, and Gains from trade," with Ana Maria Santacreu and Michael J. Sposi, Federal Reserve Bank of St. Louis Working Paper 2022-034A, September 2022.

"Private Information and Optimal Infant Industry Protection," with Raymond Riezman and Yuzhe Zhang, Federal Reserve Bank of St. Louis Working Paper 2022-013A, May 2022.

"Convergence to Rational Expectations in Learning Models: A Note of Caution," with YiLi Chien and In-Koo Cho, Federal Reserve Bank of St. Louis Working Paper 2020-027B, September 2020.

"Enduring Relationships in an Economy with Capital and Private Information," with Aubhik Khan and Latchezar Popov, Federal Reserve Bank of St. Louis Working Paper 2020-034C, September 2020.

"Capital Goods Trade and Economic Development," with Piyusha Mutreja and Michael J. Sposi, Federal Reserve Bank of St. Louis Working Paper 2014-012A, May 2014.

"Price Equalization Does Not Imply Free Trade," with Piyusha Mutreja, Raymond Riezman, and Michael J. Sposi, Federal Reserve Bank of St. Louis Working Paper 2012-010B, June 2012.

Articles in Federal Reserve Bank of St. Louis Publications

"How the Death Rate Affects the Aging of the US Population," Federal Reserve Bank of St. Louis *Economic Synopses*, 2023, No. 8.

"TFP, Capital Deepening, and Gains from Trade," Federal Reserve Bank of St. Louis *Review*, Forthcoming 2023.

"World Population: What Helps Explain the Explosion?" Federal Reserve Bank of St. Louis *Regional Economist*, Third Quarter 2022.

"Long-Term Trends in Gasoline Prices," Federal Reserve Bank of St. Louis Economic Synopses, 2022, No. 14.

"Geographic Dispersion in U.S. Employment," Federal Reserve Bank of St. Louis *Economic Synopses*, 2022, No. 9.

"Stability and Equilibrium Selection in Learning Models: A Note of Caution," Federal Reserve Bank of St. Louis *Review*, Fourth Quarter 2021, Vol. 103, No. 4, pp. 477-88.

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"Geographic Dispersion in COVID-19 Death Rates across the United States," Federal Reserve Bank of St. Louis Economic Synopses, 2020, No. 36.

"COVID-19 Cases and Deaths: Comparing the Eighth Federal Reserve District and the U.S.," Federal Reserve Bank of St. Louis *Economic Synopses*, 2020, No. 28.

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"The Lost Weeks of COVID-19 Testing in the United States: Part II," Federal Reserve Bank of St. Louis Economic Synopses, 2020, No. 25.

"The Lost Weeks of COVID-19 Testing in the United States: Part I," Federal Reserve Bank of St. Louis Economic Synopses, 2020, No. 24.

"Geographic Disparity in U.S. Output," Federal Reserve Bank of St. Louis *Economic Synopses*, 2020, No. 5.

"Value-Added Trade vs. Gross Trade," Federal Reserve Bank of St. Louis *Economic Synopses*, 2020, No. 3.

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"The Housing Supply Puzzle: Part 2, Rental Demand," Federal Reserve Bank of St. Louis *Economic Synopses*, 2018, No. 10.

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"Return to Capital in a Real Business Cycle Model," Federal Reserve Bank of St. Louis Review, Fourth Quarter 2017, Vol. 99, No. 4, pp. 337-50.

"Why Are Life-Cycle Earnings Profiles Getting Flatter?" Federal Reserve Bank of St. Louis Review, Third Quarter 2017, Vol. 99, No. 3, pp. 245-57.

"Labor Compensation and Labor Productivity: Recent Recoveries and the Long-Term Trend," Federal Reserve Bank of St. Louis *Economic Synopses*, 2016, No. 16.

"Have Labor Costs Slowed the Recovery?" Federal Reserve Bank of St. Louis *Economic Synopses*, 2016, No. 14.

"Price Equalization Does Not Imply Free Trade," Federal Reserve Bank of St. Louis Review, Fourth Quarter 2015, Vol. 97, No. 4, pp. 323-39.

"Secular Stagnation and Returns on Capital," Federal Reserve Bank of St. Louis *Economic Synopses*, 2015, No. 19.

"Accounting for Discouraged Workers in the Unemployment Rate," Federal Reserve Bank of St. Louis Economic Synopses, 2014, No. 9.

"Discouraged Workers: What Do We Know?" Federal Reserve Bank of St. Louis *Economic Synopses*, 2014,

No. 6.

"Why Was the Decline in U.S. Trade Larger This Time? A Global View," Federal Reserve Bank of St. Louis *Regional Economist*, Fourth Quarter 2013, Vol. 21, No. 4.

"Who Is Concealing Earnings and Still Collecting Unemployment Benefits?" Federal Reserve Bank of St. Louis *Regional Economist*, Second Quarter 2013, Vol. 21, No. 2.

"Who Is Concealing Earnings and Still Collecting Unemployment Benefits?" Federal Reserve Bank of St. Louis *Regional Economist*, Second Quarter 2013, Vol. 21, No. 2.

"Unemployment Benefits: How Much Money Goes Unclaimed?" Federal Reserve Bank of St. Louis *Economic Synopses*, 2013, No. 18.

"What Flattened the Earnings Profile of Recent College Graduates?" Federal Reserve Bank of St. Louis *Economic Synopses*, 2013, No. 14.

"Unemployment Insurance: Payments, Overpayments and Unclaimed Benefits," Federal Reserve Bank of St. Louis *Regional Economist*, Fourth Quarter 2012, Vol. 20, No. 4.

"Bouncing Back from the Great Recession: The United States Versus Europe," Federal Reserve Bank of St. Louis *Economic Synopses*, 2012, No. 32.

"Unemployment Insurance Fraud," Federal Reserve Bank of St. Louis Economic Synopses, 2012, No. 28.

"Earnings Growth Over a Lifetime: Not What It Used To Be," Federal Reserve Bank of St. Louis *Regional Economist*, Second Quarter 2012, Vol. 20, No. 2.

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