

PRAJYNA BARUA

barua.prajyna@gmail.com • Visa status: H4 EAD ¹ • [GitHub](#) • [LinkedIn](#)

Education	University of Texas Dallas, Richardson, TX	Ph.D. in Economics	2020- December 2025
	Jawaharlal Nehru University, Delhi, India	M.Phil in Economics	2013
	Delhi University, Delhi, India	B.A. Economics (Hons)	2006
Research Interests	Empirical Macroeconomics	Labor Economics	Business Cycle
Dissertation Title	<i>An Understanding of the US Labor Market from a Macroeconomic Perspective</i>		
Publication	Das, A., Barua, P. and Philip, D. (2018). "TPP and market access for goods." In Das, A. and Singh, S. (Ed.), Trans-Pacific partnership agreement: a framework for future trade rules? (pp. 38-75). Sage Publications.		
Working Papers	Estimating time-variation in matching efficiency and match elasticity for the US labor market (JMP) <u>Abstract:</u> The paper estimates time-varying matching efficiency and match elasticity within a Cobb-Douglas matching function for the U.S. non-farm sector, using a state-space model. It evaluates two specifications: (i) no constant returns to scale (CRS) with time variation (my baseline model) and (ii) CRS with time variation. I compare these two models with the standard model without time variability, and results show significant time variation in both parameters, even under stochastic volatility. Counterfactual vacancy estimates reveal that the non-CRS baseline model fits the data best. This model suggests a gradual decline in matching efficiency, indicating growing labor market inefficiencies. Matching efficiency and match elasticity with respect to unemployment are found to be procyclical. The procyclicality in efficiency can be attributed to reduced sectoral reallocation, as seen in IPUMS-CPS data, driven by structural economic shifts. Procyclical match elasticity points to the nonlinear effect of labor market tightness on the job-finding rate. The paper also finds a rise in the efficient unemployment rate after COVID-19, as estimated by the baseline model. Mexico's Formal Labor Market through the Lens of the Beveridge Curve (with Luis F. Colunga-Ramos, Irina Panovska, Miroslava Quiroga-Trevino, B. Elam Rodriguez-Alcaraz) Estimated Output Gap in a Wage-Inflation Expectations Model (with Azharul Islam, Irina Panovska and Srikanth Ramamurthy) Understanding unemployment dynamics		
Seminar and Conferences	Western Economic Association International, 99th Annual Conference, Presenter, Seattle, Washington		July 2024
	Midwest Econometric Group Conference 2024, Presenter, Lexington, Kentucky		November 2024
	North Texas Economics Conference (NTxEC) 2024, Presenter, University of North Texas, Denton, Texas		November 2024
	Southern Economic Association, 94th Annual Meeting, Presenter, Washington D.C.		November 2024
	The Society for Nonlinear Dynamics and Econometrics, 32nd Annual Symposium, Presenter, University of Texas at San Antonio		March 2025
	Southern Economic Association, 95th Annual Meeting, Graduate students session, Presenter, Tampa, Florida		November 2025
	North Texas Economics Conference (NTxEC) 2025, Presenter, University of Texas at Arlington		November 2025
Awards and Fellowships	Charles C. McKinney Scholarship, University of Texas Dallas		2025, 2024
	Irving J. Hoch Scholarship award, University of Texas Dallas.		2022
	Ph.D. Fellowship, University of Texas Dallas		2020-2024
	Junior Research Fellowship, University Grant Commission, India		2012-2014

¹Authorized to work in the United States

Teaching Experience	<i>Instructor</i> , ECON 2301 Principles of Macroeconomics, University of Texas Dallas.	Su. 2023, 2024, Sp. 2025, Fall 2025
	<i>Instructor</i> , EPPS Math and Coding Boot Camp , University of Texas Dallas: I served as one of the primary instructors for the Math Boot Camp designed for Master's and incoming Ph.D. students. My responsibilities included developing course materials, delivering lectures, engaging with students through discussions and problem-solving sessions, and providing individualized feedback to support their academic preparation.	2024, 2025
	<i>Teaching Assistant</i> , ECON 4386 Contemporary Macroeconomic Policy, University of Texas at Dallas	Fall 2023
	<i>Teaching Assistant</i> , ECON 6303 Macroeconomics Theory I, University of Texas at Dallas	Fall 2023
	<i>Teaching Assistant</i> , ECON 4385 Business and Econ Forecasting, University of Texas at Dallas	Spring 2023
	<i>Teaching Assistant</i> , ECON 5397 Special Topics in Economics, University of Texas at Dallas	Spring 2023
	<i>Teaching Assistant</i> , ECON 6306 Applied Econometrics, University of Texas at Dallas	Fall 2022
	<i>Teaching Assistant</i> , ECON 4320 Public Sector Economics, University of Texas at Dallas	Spring 2022
	<i>Teaching Assistant</i> , ECON 4302 Urban and Regional Economics, University of Texas at Dallas	Fall 2021

Research Experience	<i>Research Assistant</i> , University of Texas Dallas, Dr. Irina B. Panovska	Summer 2022
	<i>Research Assistant</i> , University of Texas Dallas, Dr. Denise P. Boots	Summer 2021
	<i>Research Fellow</i> , Centre for WTO Studies, New Delhi, India: I extensively worked on market access provided by Trans-Pacific Partnership Agreement to its members and the extent of India's comparative disadvantage by being part of it. This required analyzing detailed tariff schedules both at country and for specific sectors and, evaluating a comprehensive unit value analysis for all members.	2015 – 2016
	<i>Programme Executive</i> , United Nations Development Programme, India: I was involved in preparation of the Bid document for hosting New Delhi as the NDB's (New Development Bank) Headquarters and provided brief reports on areas such as lending, governance, infrastructure financing, capital structure, and costing among others, with respect to the functioning of the NDB which were used as inputs for negotiations for the Articles of Agreement. I also provided regular updates on the macroeconomic situation in BRICS economies, analyzing their economic trends, and policies.	2013 – 2015

Software R, Matlab, Stata and Python

Academic Service Barua, P. (Chair), Macroeconomics 3, SNDE'25, San Antonio, Texas
Discussant, WEAI'24 Session: "Trade Policies and the Relative Size of the Informal Sector in Developing Economies" by Mohammed Mohsin.

References	Dr. Irina B. Panovska	Dr. Camilo Granados	Dr. Victor Valcarcel
	Dissertation Chair		
	Associate Professor of Economics	Assistant Professor of Economics	Professor of Economics
	The School of Economic, Political and Policy Sciences	The School of Economic, Political and Policy Sciences	The School of Economic, Political and Policy Sciences
	University of Texas at Dallas	University of Texas at Dallas	University of Texas at Dallas
	Richardson, TX 75080	Richardson, TX 75080	Richardson, TX 75080
	972-883-6247		972-883-6213
	Irina.Panovska@utdallas.edu	camilo.granados@utdallas.edu	victor.valcarcel@utdallas.edu