MD MOHIUDDIN

Macroeconomics | Applied Econometrics | Energy Economics

Ph.D. Candidate (ABD) | Department of Economics | Texas Tech University

2026-27 UC Berkeley BITSS Catalyst Grant Awardee

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Education

Ph.D. in Economics (ABD), Texas Tech University Spring 2027 (Expected)
Dissertation: *Household and Economic Adjustment to Energy, Environmental, & Technological Disturbances*
Committee: Misak G. Avetisyan (Chair), Xiaohan Ma, Sie Won Kim, Freddie Papazyan, and Sue Yang.

M.S. in Economics, Texas Tech University Fall 2026 (Expected)
STEM-designated; earned en route to the Ph.D.

M.S. in Analytical Economics, University of New Hampshire 2022
STEM-designated; Peter T. Paul College of Business and Economics

M.S.S. & B.S.S. in Economics, University of Chittagong WES GPA: 4.0 / 3.90

Research Fields

Primary: Macroeconomics; Applied Econometrics; Energy Economics.
Secondary: Monetary Economics; International Economics; Computational & Macroeconomic Forecasting.

Job Market Paper

- **Consumer Demand and Household Welfare under Large Oil-Price Shocks: Evidence and Structural Interpretation**
  - Investigates whether households smooth consumption after large oil-price shocks and how these shocks affect purchases, durable and nondurable consumption, intertemporal demand, and consumer welfare.
  - Estimates dynamic adjustment during the 2008 oil spike, the 2020 collapse, & the 2022 oil-price shock.
  - Integrates event-study & local-projection evidence with a structural DSGE framework to explain heterogeneous consumption adjustment & quantify household welfare consequences of these large shocks.
  - **Methods:** Instrumental Variables, Local Projections, Bayesian VAR, DSGE, Welfare Analysis.

Selected Working Papers and Research Projects

- **AI-Induced Trade Exposure and Strategic Concentration Risk in the United States**
  Dissertation Chapter, Available on SSRN
  - Constructs measures of technology-related trade exposure by combining sectoral trade data, technology intensity, and bilateral import networks.
  - Studies how technological and geopolitical shocks reorganize U.S. trade relationships and strategic supply-chain concentration.
  - Examines dynamic adjustment following major changes in the U.S.-China trade environment.
  - **Methods:** Panel Fixed Effects, Local Projections, Bayesian VAR, Network Measures, Trade Analytics.

- **Local Labor Market Adjustment to Wildfire Shocks: Evidence and Mechanism Decomposition from U.S. Counties,** *Dissertation Chapter*
  - Constructs a county-year panel combining MTBS wildfire exposure, PRISM climate conditions, QCEW employment, socioeconomic characteristics, and migration data.
  - Estimates how severe wildfire shocks affect employment dynamics, local labor-market adjustment, regional adaptation, and economic resilience.
  - Examines heterogeneous employment responses across U.S. regions and mechanisms linking environmental shocks to local economic adjustment.
  - Methods: Panel Local Projections; Event-Time Diagnostics; Multiway Clustered Inference; Treatment-Sensitivity Analysis; Mechanism Decomposition.

- **Medicare Eligibility and Household Economic Resilience** *Available on SSRN*
  - Uses PSID data and a fuzzy regression discontinuity design at the age-65 Medicare eligibility threshold to estimate the causal effects of public health insurance on labor supply, retirement, medical expenditures, debt, and household economic outcomes.
  - Finds a sharp increase in Medicare coverage at age 65 and examines the resulting changes in employment, weeks worked, and retirement behavior.
  - Connects health-insurance eligibility to household economic resilience through labor-supply adjustment, retirement decisions, and financial exposure to medical costs.
  - **Methods:** Fuzzy Regression Discontinuity; Instrumental Variables; Covariate Balance Tests; Placebo Cutoffs; Donut Specifications; Bandwidth Sensitivity.

Education Economics and Policy Research

Preparing Students for an AI Economy *Work-in-progress*

- Examines how education adapts to AI-driven changes in labor demand and skills.
- Measures regional heterogeneity in AI preparedness and readiness.
- Employs difference-in-differences, event-study methods, and policy evaluation frameworks to examine education and workforce readiness.
- Presented at the Midwest Institutes Conference, Disruptive Innovation Track, 2026.

Open Economics Lab: Advancing Computational Reproducibility and Research Transparency in Graduate Economics Education

- Competitive UC Berkeley BITSS Catalyst Grant project, 2026-27.
- Develops graduate-level research in transparent empirical workflows and open-science practices.
- Produces workshop-driven teaching and reproducible research tools for graduate economics.

Monetary Economics and Macroeconomic Forecasting

- **An Agent-Based LLM Framework for Inflation Forecasting: Evidence from Federal Reserve Communications** *Work-in-progress*
  - Develops an agent-based New Keynesian framework in which households, firms, and policymakers form expectations using macro indicators and Federal Reserve communications.
  - Integrates large-language-model-based expectation operators with text-derived signals extracted from FOMC statements using FinBERT and text-as-data methods.
  - Preliminary results indicate that communication-augmented forecasts outperform random-walk and autoregressive benchmarks in predicting U.S. inflation.
  - **Methods:** Time-Series Forecasting, Large Language Models, FinBERT, Text-as-Data, Statistical Learning, Agent-Based Modeling, Forecast Evaluation.
- **Digitalization and Citizen Complaints: Evidence from NYC 311 Data** *Work-in-progress*
  - Analyzes digital platforms' effects on reporting, engagement, and government response.
  - Uses complaint data to study platform-based service delivery and behavioral response.

Academic Appointments

Research Consultant Texas Tech University
Accounting Department, Rawls College of Business May 2026-Present

- Integrate AI, data science, applied economics, and policy evaluation in interdisciplinary research.
- Build large-scale empirical pipelines using HPCC, R, Stata, and multi-source economic data.
- Collaborate on reproducible empirical research using causal inference & computational methods.

Graduate Part-Time Instructor Texas Tech University
Department of Economics 2025-Present

- Graduate Environmental Economics **(GTAP Simulation Instruction)**
  Cover CGE model structure, closures, policy shocks, simulation exercises, and interpretation.

- Recitation/Instructor for Intermediate Economic Theory and Principles of Macroeconomics.
- Designed and delivered lectures, assignments, assessments, and student support activities.
- Mentored students and supported academic success through advising and instruction.

Assistant Professor, 2015-2023 University of Chittagong, Bangladesh
Currently on approved study leave for Ph.D. study

- Taught undergraduate and graduate courses in economics, econometrics, quantitative methods, macroeconomics, and applied policy analysis.
- Supervised student research and advised undergraduate and master's students.
- Contributed to curriculum development, academic advising, and departmental service.
- Promotion to Associate Professor approved in 2023; appointment status during study leave subject to institutional procedures.

Lecturer in Economics University of Chittagong, Bangladesh
2012-2015

- Advised and mentored students and participated in departmental academic and service activities.
- Taught undergraduate economics courses and developed lectures, assignments, and examinations.

Adjunct Faculty Appointments Bangladesh

- Taught Managerial Economics, Business Statistics, and Economics across multiple universities.
- Developed applied coursework emphasizing managerial decision-making and business analytics.

Selected Teaching Experience and Microeconomic Preparation

Texas Tech University: Principles of Macroeconomics (2026); Intermediate Economic Theory (2025); Graduate Environmental Economics (GTAP simulation instruction, 2026).
Texas Tech University, Teaching Assistant (TA): Intermediate Macroeconomics (2025); Statistics for Economists (2024); Principles of Money, Banking, and Credit (2024); Monetary Theory (2024).
University of New Hampshire, TA: Principles of Macroeconomics(2021); Money and Banking (2022).
University of Chittagong, selected courses: Principles of Macroeconomics; Statistics; Econometrics; Environmental Economics and Project Analysis; Financial Investment Security Analysis.
Other faculty teaching: Business Statistics; Managerial Economics; Mathematical Economics; Microeconomics and Macroeconomics; Mathematical Programming and Dynamic Optimization.

Peer-Reviewed Publications

Mohiuddin, M., & Taslima, K. (2025). Economic Structuration and Environmental Kuznets Curve. *Journal of Business Administration, University of Chittagong.*

Mohiuddin, M. (2017). Determinants of Profitability of Private Banks in Bangladesh. *IGDIR University Journal of Social Sciences.*

Selected Conference Presentations and Research Dissemination

- **Midwest Macroeconomics Meeting (Scheduled)** 2026
  Consumer Demand & Household Welfare under Large Oil-Price Shocks: Evid. & Structural Interpretation
- **Southern Economic Association Annual Meeting (Scheduled)** 2026
  AI-Induced Trade Exposure and Strategic Concentration Risk in the United States.
- **Market and Society Conference** 2026
  AI-Induced Trade Exposure and Strategic Concentration Risk in the United States.
- **University of California, Berkeley Initiative for Transparency in the Social Sciences** 2026
  Preparing Students for an AI Economy.
- **IHS Graduate Conference for the Social Sciences** 2026
  Local Labor Market Adjustment to Wildfire Shocks: Evidence from U.S. Counties.
- **Midwest Institutes Conference, Disruptive Innovation Track** 2026
  Preparing Students for an AI Economy.

- **University of California, Berkeley Sloan Summer School on Environment & Energy** 2025
  Local Labor Market Adjustment to Wildfire Shocks: Evidence from U.S. Counties

Quantitative Methods and Computational Skills

Econometrics and Causal Inference: IV-GMM; Difference-in-Differences; Regression Discontinuity; Event Studies; Panel Econometrics; Mundlak Correlated Random Effects; Local Projections.

Time Series and Bayesian Methods: Bayesian VAR; Time-Series Forecasting; Dynamic Response Analysis; Bayesian Multilevel Modeling; Forecast Evaluation.

Structural and Computational Methods: DSGE Modeling; Agent-Based Modeling; Network Analysis; Large-Scale Simulation; Welfare Analysis; GTAP.

Artificial Intelligence and Statistical Learning: Machine Learning; Large Language Models; Natural Language Processing; FinBERT; Text-as-Data; Predictive Analytics.

Programming: Python; R; MATLAB; Stata; Git; LaTeX; High-Performance Computing (HPCC).

Fellowships and Scholarships

Covenant Health and Social Services Graduate Fellowship, TTU	Fall-Spring 2026
I.C. Enoch III Scholarship, TTU	Fall-Spring 2026
International Affairs Scholarship, TTU	Fall-Spring 2025–2026
Cash Family Endowed Graduate Fellowship, TTU	Fall-Spring 2025
Raiders Defending Life Scholarship, TTU	Spring 2025
Dr. Rashid B. Al-Hmoud Scholarship, TTU	Fall-Spring 2025
Graduate Dean Fellowship, University of New Hampshire	Fall-Spring 2021-2022
Graduate Fellowship, University of Chittagong	Fall-Spring 2010

Selected Fully Funded Competitive Academic Programs and Training

- UC Berkeley Research Transparency and Reproducibility Training, BITSS 2026
- Mises University Conference 2026
- AIER's Harwood Graduate Colloquium on Governance and Self-Governance 2026
- General Fellow, The Philadelphia Society 2026
- UC Berkeley Sloan Summer School on Environment and Energy 2025
- Workshop on the Political Economy of Emerging Technology, IHS 2025
- University of Chicago Seminar on Classical Liberalism and Business, AIER 2025
- Classical Liberal Philosophy, Cato Institute, Washington, DC 2025
- Indiana Seminar in Classical Liberalism, AIER 2025
- TTU Special Education Research, Burkhart Center 2025
- University of Chicago Seminar on Classical Liberalism and Business, AIER 2024
- Trade and Sustainability Program, ITEC, New Delhi 2016

Academic and Professional Service

- TTU International Affairs Global Guide Ambassador Fall 2025-Present
- TTU IEE Intercultural Friendsgiving Day Fall 2025
- TTU International Affairs Graduation Ceremony Fall 2025
- Mock Juror, Texas Voir Dire Competition Fall 2025
- TTU Graduate Research Poster Competition, Reviewer Fall 2024-Spring 2025
- TTU Undergraduate Research Poster Competition, Reviewer Spring 2024-Spring 2026
- TTU Writing Center Card Writing for Senior Citizens Spring 2025
- Midwest Macroeconomic Conference, Texas Tech University Fall 2023
- TTU Three Minute Thesis Competition, Reviewer Fall 2023
- TTU Arts & Humanities Conference, Reviewer Spring 2023
- UNH Graduate Student Senator, Peter T. Paul College Fall 2021-Fall 2022
- Lead UNH, University of New Hampshire Fall 2021-Fall 2022