Shadi Rahimfallah

Economist | *Ph.D. Candidate in Economics, York University*
Toronto, ON | shadirf@yorku.ca | shadirahimfallah.github.io | LinkedIn | GitHub

PROFILE

Economics Ph.D. Candidate, York University (expected 2027). *Research:* firm investment, used capital, and misallocation; firm capability and technology adoption; and electricity market design. *Industry and consulting:* built demand, pricing, and cost models, business cases, budgets, and forecasts for CEOs, shareholders, and clients. Excel, Python, Stata, R, SQL, MATLAB, ML. Authorized to work in Canada.

EDUCATION

Ph.D. in Economics, York University, Toronto — 2022 – 2027 (expected)
Supervisors: Tasso Adamopoulos and Chaoran Chen

M.Sc. in Energy Economics, University of Tehran, Tehran — 2016 – 2019
Thesis: "Shale Gas and the Export Competitiveness of Iran's Petrochemical Industry"

B.Sc. in Theoretical Economics, Shahid Beheshti University, Tehran — 2012 – 2016

RESEARCH PROJECTS

Growth, Productivity, and Macro-Finance

"Financial Frictions, Used Capital, and Misallocation", *Dissertation paper* [PDF] [SSRN] [Slides] [Code]
Under review, *Journal of Economic Dynamics and Control*

General-equilibrium model with new and used capital and borrowing constraints, solved by dynamic programming; firm fixed-effects regressions on Vietnamese data for calibration: used capital cuts productivity losses by 39%.

➤ Presented at: CEA Annual Meetings (2025, 2026); Macro Development Group, York University (2025, 2026)

"Second-Hand Machines, Firm Capability, and Technology Adoption", draft in progress

Method: a static model of vintage choice: newer vintages need know-how and funds, so capability and finance decide who buys new.

"News, the Economy, and Bond Returns", with Alireza Naeiji, work in progress

Forecasting: how macroeconomic data and news text predict future Treasury excess returns. Deep learning, ML

Energy and Electricity Markets

"Electricity Capacity Market", with Jeremy Lin (Johns Hopkins; formerly PJM), work in progress

Large-load market design for new data-centre load in PJM. *Keywords:* capacity market auction; financial modelling of new and existing plants; plant-dispatch model; energy and ancillary revenues (E&AS); reliability requirement .

"Geoeconomics of Global Energy Transformation", with Farkhondeh Jabalameli, *Journal of World Sociopolitical Studies* 7(1): 55–87, 2023 [DOI]

Time-series econometrics (ARDL bounds test, error correction, causality tests): long-run oil pass-through to U.S. polyethylene prices.

Public Data Reports

"One Dollar, Thirteen Economies: Input–Output Multipliers Across Canada's Provinces, 2010–2022", Statistics Canada input–output tables [Report]

How much of each dollar of provincial output stays in the province, flows to other provinces, or leaks abroad.

"Canada's Exporters and the U.S. Market, 2000–2025", Statistics Canada data [Report]

"How Canadian Firms Work: Evidence from the 2024 Enterprise Survey", survey-weighted [Report]

Obstacles, innovation, finance, trade, and green practices of Canadian firms by size, sector, and region.

"Jobs, Wages and Training in Vietnam's Small Manufacturers, 2007–2015", worker survey [Report]

Wages, gender pay gaps, contracts, social insurance, and returns to training across five survey waves.

PROFESSIONAL EXPERIENCE

Research

Research Assistant, York University — 2023 – 2025

Responsibilities: *Conducted causal inference using a World Bank cluster-randomized controlled trial (RCT) on land titling in the Philippines; reconstructed raw survey data, conducted balance and attrition checks, estimated ANCOVA intent-to-treat effects with clustered standard errors, and tested consumption insurance. Built a World Bank–FAO country–year panel on trade risk and food security.*
Tools & Technologies: *Python, Stata.*

Research Assistant, University of Tehran — 2018

Responsibilities: *Studied Iran's day-ahead electricity market design and regulation and analyzed generator bidding data for market power; compared administered and market gas prices; causal inference (two-way fixed effects) on how supply shocks and export credit shape Iran's export diversification.*
Tools & Technologies: *MATLAB, Stata, Python.*

Industry and Consulting

Senior Financial & Economic Analyst | Accounting, Partogen Beh Tashkhis — 2019 – 2021

Responsibilities: *Led financial and market analysis for the CEOs and shareholders of a four-company diagnostics group; built business cases for new tests, from market sizing and cost per test through pricing; built demand, price, and cost forecasts for budgeting and business planning; led the case for COVID-19 PCR testing on existing equipment, which became a material contributor to revenue.*
Tools & Technologies: *Stata, SQL, Tableau.*

Financial & Economic Analyst | Accounting, Partogen Beh Tashkhis — 2016 – 2019

Responsibilities: *Built demand, pricing, and market-sizing models from sales data; tracked competitor prices and market shares; prepared the budgets and financial reports for the laboratory and three affiliated companies.*
Tools & Technologies: *Excel, SQL, Tableau.*

Economic Analyst, Batab Kara, Economic and Investment Consulting — Summer 2017

Responsibilities: *Wrote and presented economic and investment reports for client CEOs and strategy teams; built a house-price forecasting model in MATLAB whose scenarios clients used to time investments; assessed an exporting client's trade risk, including exposure to sanctions and export-market concentration.*
Tools & Technologies: *MATLAB, Stata.*

SKILLS

Programming & Analytics: Excel, Python, Stata, R, SQL, MATLAB, Tableau, Git, LaTeX, ML

Modelling: General-equilibrium models (dynamic programming, calibration, counterfactuals); business cases, DCF/NPV, project appraisal; budgeting and forecasting, Deep learning

Econometrics: Impact evaluation (RCTs, ANCOVA, difference-in-differences); fixed-effects panels; time series (ARDL, error correction) and forecasting; neural networks; survey weights; demand elasticities

Energy, Competition & Regulation: Capacity markets (Net CONE, VRR curve); plant dispatch and E&AS; large-load growth; bidding and market power

Languages: English (fluent), Persian (native)

TEACHING AND SERVICE

Teaching Assistant, *York University* — 2022 – Present
Project Appraisal, Development Policy, Micro and Macro, Mathematics, Labour

Volunteer Leader and Instructor, Graduate Econometrics Initiative, *University of Tehran* — 2018 – 2020
Taught computational methods to students

Session Chair, *59th CEA Meetings* (2025); Secretary, *York Economics Graduate Student Assoc.* (2024)

GRANTS & AWARDS

LA&PS Dissertation Fieldwork Fellowship, *York University*	2025
MacroFinance Summer School, full scholarship, *Princeton University*	2025
Computational Methods for Macroeconomics, full scholarship, *Econometric Society*	2023
Decision-Making under Risk, full scholarship, *University of Würzburg*	2021
Full Ph.D. Scholarship, *York*; M.Sc. and B.Sc. Full Scholarships (top 1% nationally), *Iran*	2022, 2016, 2012

REFERENCES

Tasso Adamopoulos
Supervisor
Professor of Economics
York University, Toronto, Canada
aadamo@yorku.ca

Chaoran Chen
Supervisor
Associate Professor of Economics
York University, Toronto, Canada
chenecon@yorku.ca

Jeremy Lin
Research Collaborator
Lecturer, Energy Policy and Climate
Johns Hopkins University, Washington, D.C., USA
Director, Transmission Analytics
Formerly with PJM Interconnection
jlin137@jhu.edu

Yanran Guo
Committee Member
Assistant Professor of Economics
York University, Toronto, Canada
yrguo@yorku.ca