Faraz Hayat

□ +92 331 427 9492 • □ shayat1@uchicago.edu

Summary

Applied economist studying how technology adoption and incentives solve real-world problems. Designs and runs RCTs and quasi-experiments with national agencies and translates evidence into operational systems.

Education

University of Chicago

PhD Economics 2016–2022

University of Chicago

MA Economics 2016–2018

Swarthmore College

BA, Mathematics & Economics 2010–2014

Professional References

Michael Greenstone (University of Chicago), Robin Burgess (London School of Economics), Tim Dobermann (International Growth Centre), Ijaz Nabi (International Growth Centre)

Select Experience

International Growth Centre (IGC), London School of Economics Postdoctoral Researcher

Lahore, Pakistan

2023-Present

- Develop an energy, environment, and climate change research agenda for Pakistan
- Lead stakeholder engagement with policymakers to advance policy and research:
 - Designed and implemented experimental studies costing GBP 300k with a major electric utility (LESCO) to evaluate the return on investment and welfare effects of anti-theft technologies, financial incentives, and enhanced audits
 - Built capacity at Punjab Environment Protection Department by training staff and developing a USD 700k proposal for piloting a Cap-and-Trade market in Lahore, which has been approved by the government

Ministry of Energy and FBR, Government of Pakistan

Islamabad, Pakistan

External Advisor

2019-Present

- Led a quasi-experimental study using firm-level transaction filings to quantify the effect of energy subsidies on export productivity; results were presented to the Prime Minister and Cabinet, directly supporting the phase out of USD 300 million in subsidies
- Led an experimental study with the Federal Board of Revenue (FBR) comparing its Customs risk management system with Al-driven alternatives; insights guided annual procurement decisions exceeding USD 2 million
- Developed and deployed a randomized internal audit system for FBR, uncovering critical deficiencies in the Customs Risk Management System (RMS); presented findings to the Prime Minister and Cabinet, directly influencing national policy reforms to upgrade RMS infrastructure

Energy Policy Institute at UChicago (EPIC)

Chicago, USA

Research Assistant

2014-2016

- Used Stata, Python, and R to clean and analyze large microdata sources—including PSID, CPS, OEWS, and IPUMS—and implemented econometric methods such as event studies and regression discontinuity designs for papers published in top academic journals
- A select few of the papers are:
 - Adapting to Climate Change: The Remarkable Decline in the U.S. Temperature-Mortality Relationship
 - The Local Economic and Welfare Consequences of Hydraulic Fracturing

Select Research Projects

Do Value-Added Taxes Distort Input Decisions? Evidence from Pakistan

- Abstract: We examine how firms' input choices respond to the value-added tax (VAT) on purchases, using detailed VAT return data from Pakistan and a quasi-experimental variation in electricity VAT rates. Contrary to traditional theories that intermediate VATs don't affect production decisions, our study reveals a significant elasticity of electricity demand to VAT rates (-0.81). These findings aren't attributed to tax evasion shifts but to frictions in the VAT refund system. Specifically, many firms, not collecting VAT on output, depend on government reimbursements for their VAT credits, explaining our results.

Pushing on a String? Price and Enforcement Interventions in Pakistan's Power Sector

- RCTs with government on (i) using religious messaging to change social norms on electricity payments; (ii) using subsidies to estimate elasticities of theft; (iii) using field audits to increase enforcement; (iv) using aerial bundled cables to increase the difficulty of stealing electricity
- With R. Burgess, T. Dobermann, M. Greenstone, and U. Naeem
- Grants: £168k (IGC), \$75k (J-PAL), \$93k (Weiss Fund)

Role of Seasonal Credit in Facilitating Adaptation to Climate Change

- An RCT with an NGO on measuring the welfare effects of providing loans in summer to impoverished households in rural Pakistan
- With R. Burgess, T. Dobermann, M. Greenstone, and U. Naeem
- Grants: \$45k (J-PAL)

The Economic Costs of Distorted Power Tariffs: Evidence from Power Purchase Agreements (PPAs) in Pakistan

- Assembling a database on all PPAs to measure how asymmetric information and regulatory capture distort power tariffs and create misallocation
- With T. Dobermann and S. Srivastav
- Grants: £12k (IGC)

Financial Frictions and Variable Markups

- Analyzing the cost of financial frictions in the presence of variable markups by building a quantitative heterogeneous-agent model of producer dynamics, and calibrating the model to Pakistani data
- With A. Tsiflis

Other Policy Work

Golub, Stephen, and Hayat, Faraz. Employment, Unemployment, and Underemployment in Africa, *Oxford Handbook of Africa and Economics 2015*.

Dobermann, T., Hayat, F., Naeem, U., Qaddus, M.K., and Raza, M. (2020). Building a Healthy Power Sector in Pakistan, *Government of Pakistan report*.

Dobermann, T., Hayat, F., Sugandha, S. (2024). Responding to Pakistan's Climate Crisis, *Policy Podcast, Consortium for Development Policy Research*.

Teaching

University of Chicago

Teaching Assistant 2016–2022

- Courses included graduate public economics, and undergraduate econometrics, energy markets, and environmental and urban economics

Other Skills

Programming: Python, Julia, R, Stata, LaTeX, QGIS

Languages: English, Urdu