

Jesús David Martínez Hernández

✉ jmartinezhernandez@fas.harvard.edu

Academic Experience

Department of Economics, Harvard University

Cambridge, Massachusetts

Predoctoral Research Fellow (For [Emily Breza](#) and [Davide Viviano](#))

September 2025–Currently

- Focused in Causal Inference and Machine Learning for Policy Learning. Implementing custom ML learners (ensemble of exhaustive regression trees for regression with option to rejection problem); and using PAC and Bayesian theory to provide finite sample guarantees on their performance to minimize the risk of a [statistical decision problem related to meta analysis of experimental evidence](#).

Department of Economics, Georgetown University

Remote

Predoctoral Fellow (For [Juan Felipe Riaño](#))

August 2024–August 2025

- Co-author of *Social Dissent, Coercive Capacity, and Redistribution: Evidence from Authoritarian Mexico*, with [Horacio Larreguy](#), [Juan Felipe Riaño](#), and [Mariano Sánchez-Talanquer](#).
- Processed thousands of news articles and governmental documents using locally hosted open source large language models to build novel panel data of Mexican State repression activities. Later used Causal Inference methods to analyze the data.
- Implemented Machine Learning methods to estimate Heterogeneous Treatment Effects (HTEs) on Randomized Controlled Experiments and make inference on their concentration depending on available covariates.

J-PAL LAC, PUC

Mexico City

Research and Scaling Fellow

April 2024–August 2025

- Fellowship at the [J-PAL Latin America and the Caribbean](#). Led the research effort to convince and implement Causal Inference based program evaluations at INFONAVIT, Latin America's largest mortgage lender.
- Designed quasi-experimental and experimental evaluations to assess the impact of three massive mortgage restructuring programs (2+ million mortgages affected). Work in progress with [Jose Ignacio Cuesta](#), [Mauricio Romero](#) and [Gaston Llanes](#).

Economic Research Center at ITAM

Mexico City

Research Assistant for [Horacio Larreguy](#)

June 2022–August 2024

- Co-author of *The Effect of Russian Misinformation and Propaganda* (former undergraduate thesis and it has been presented at seminars including Oxford, Toulouse, Munich and Stockholm universities).
- Co-author of *Media Networks and Political Accountability: Evidence from Radio Networks in Brazil*.

Economics Department at ITAM

Mexico City

Teaching Assistant

- Graduate courses: ML and Causal Inference for econ. empirical research (2 semesters). Undergraduate courses: Intermediate Microeconomics (Game Theory and General Equilibrium) (1 semester), Introductory Macroeconomics (3 semesters), *Gendered Inequalities in Economics and Politics* (1 semester), and *Political Economy of Development* (1 semester).

Selected Professional Experience

Banorte Finacial Group

Mexico City

Strategy Deputy Director

April 2023–April 2024

- Designed and led randomized controlled trials to test and propose policies at Banorte, Mexico's second largest financial institution.
- Supervised a small team of analysts, executing experimental evaluations across multiple projects and products.
- Conducted heterogeneous treatment effects analysis with Machine Learning to identify differential impacts across client subgroups and inform targeted interventions. Experimental evaluations of the ML targeting criteria showed significant gains from it.

The Institute of the National Housing Fund for Workers (INFONAVIT)

Mexico City

Senior Consultant

December 2021–April 2023

- Provided statistical analysis and econ. counsel to mitigate financial risks related to mortgage portfolios and fixed-income assets. Participated in regulatory meetings to determine operation rules for Mexican construction companies.

Education

Mexico Autonomous Institute of Technology (ITAM)

Mexico City

M.A. in Economic Theory (GPA: 9.67/10)

January 2024–May 2025

Highlighted coursework: Machine Learning and Deep Learning (CS dept.), Real Analysis I & II and Applied Bayesian Statistics (Math dept.), Advanced Research Seminars I & II, Game Theory, Advanced Microeconometrics, Advanced (Macro/micro)economics, and Decision Theory (Econ dept.).

Mexico Autonomous Institute of Technology (ITAM)

Mexico City

B.A. in Economics (GPA: 9/10, Highest Honors)

August 2017–December 2021

Graduated with specialization in Economic Research by completing core courses from the M.A. in Economic Theory during undergrad.