Matias Covarrubias

Research Economist, Bank of Spain

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Current Position

Research Economist, Monetary Policy Strategy Unit, Bank of Spain, 2022–present

Education

Ph.D. in Economics, New York University, 2015–2022
Thesis: *Dynamic Oligopoly and Monetary Policy: A Deep Reinforcement Learning Approach*

M.Phil. in Economics, New York University, 2015–2017

Visiting Student, University of Chicago, 2012–2013

M.A. in Economics, Pontificia Universidad Católica de Chile, 2011–2012

B.A. in Economics, Pontificia Universidad Católica de Chile, 2007–2011

Research Fields

Primary: Macroeconomics, Machine Learning

Secondary: Industrial Organization, Finance

Publications

"The AI Boom in the US Production Network" (with Vasco Carvalho and Galo Nuño). *AEA Papers and Proceedings*, forthcoming.

"From Good to Bad Concentration? U.S. Industries over the Past 30 Years" (with Germán Gutiérrez and Thomas Philippon). *NBER Macroeconomics Annual 2019*, vol. 34: 1–46.

"Who Comes and Why? Determinants of Immigrants' Skill Level in the Early XXth Century U.S." (with Jeanne Lafortune and José Tessada). *Journal of Demographic Economics* 81(1), 2015: 115–155.

Working Papers

Planning Against Disasters in Dynamic Production Networks (with Vasco Carvalho and Galo Nuño)
Submitted.

Optimal Monetary Policy in an Open Networked Economy: The Case of Tariffs and Energy Prices (with Rubén Domínguez-Díaz, José-Elías Gallegos, and Omar Rachedi)

The Indirect Effect of Minimum Wage Increases: Propagation through Firm Networks (with Javier Quintana, Palma Mosberger, and Lajos Szabo)

A Deep Reinforcement Learning Approach to Dynamic Behavior in Markets

Dynamic Oligopoly and Monetary Policy: A Deep Reinforcement Learning Approach (Job Market Paper)

Policy Work

Currently working on: artificial intelligence and data-center investment; optimal monetary policy; LLM-based metrics and their high-frequency asset-price impact; the monetary policy operational framework.

Report on Monetary Policy Tools, Strategy and Communication (contributing author; with Christophe Kamps, Matthieu Bussière, Birgit Niessner, Oreste Tristani, Kai Christoffel, and others)
ECB Occasional Paper Series No. 372, June 2025.

The Welfare Cost of Markups in Product Markets in Spain: An Analysis with Heterogeneous Firms (with Alfonso Camba, José Luis Rodríguez, and Raquel Tárrega)
Bank of Spain Occasional Paper 2611, April 2026 (in Spanish).

The Market Impact of ECB Governing Council Members' Speeches: An Evaluation Using LLMs (with Ana Arancibia, Jaime Martínez, and Florens Odendahl)

Scientific committee member and conference coordinator, "The Impact of Artificial Intelligence on the Macroeconomy and Monetary Policy," ESCB ChaMP Research Network and Bank of Spain conference, Madrid, 24 October 2024

Teaching

Full-time Adjunct Instructor, Pontificia Universidad Católica de Chile, 2014–2015

Teacher Coordinator, university-wide Principles of Microeconomics courses, Pontificia Universidad Católica de Chile, 2014

Professional Service

Referee: *Quarterly Journal of Economics*, *European Economic Review*, *Journal of Industrial Organization*

Honors, Scholarships, and Fellowships

2015 MacCracken Fellowship, New York University

2013 Raul Yver Award for the Best Economist of the Generation, Pontificia Universidad Católica de Chile

2013 Academic Excellence Award, M.A. in Economics, Pontificia Universidad Católica de Chile

2013 Maximum Distinction Award for Master's Thesis, M.A. in Economics, Pontificia Universidad Católica de Chile