Michael Cai

$\frac{Northwestern}{\text{Economics}}$

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RESEARCH Macroeconomic Interests

Macroeconomics, Behavioral Economics

EDUCATION Ph.D in Economics, Northwestern University 2025 (expected)

Committee: Matthias Doepke (Chair), George Marios Angeletos, Matthew Rognlie B.S. summa cum laude in Economics, New York University Stern School of Business 2017

Job Market Paper

Explaining the Macroeconomic Inertia Puzzle

Many macroeconomic models struggle to explain the sluggish response of aggregate variables to sudden shocks and changes in policy. While numerous theories of adjustment frictions and bounded rationality have been proposed to explain this macroeconomic inertia, no consensus has emerged among them. I show that canonical heterogeneous-agent models—Blanchard (1985) perpetual youth and Bewley (1986) incomplete markets—are consistent with aggregate consumption inertia if agents' average expectations of income and interest rates align with survey expectations of these variables. To determine the causes and analyze the policy implications of inertia, I adopt a model of frictional Bayesian learning which can explain patterns of forecast errors in expectations data that existing theories struggle to account for. Incorporating this form of learning into a standard heterogeneous-agent New Keynesian environment, I provide a theory for how inertia arises endogenously. Inertia results when the equilibrium amplification of an initial shock exceeds expectations, causing them to slowly unanchor. This theory yields a novel drawback for inertial monetary policy rules and delayed financing of fiscal deficits. Policy regimes that act more gradually result in longer transmission lags.

WORKING PAPERS

Optimal Long-Run Fiscal Policy with Heterogeneous Agents

(with Adrien Auclert, Matthew Rognlie, and Ludwig Straub)

We introduce a new method for characterizing the steady state of dynamic Ramsey problems, building on the dual approach to optimal taxation. Applying this method to standard calibrations of heterogeneous-agent models à la Aiyagari (1995), we find that in many cases Ramsey steady states do not exist, with our results suggesting that long-run immiseration is optimal instead. When Ramsey steady states do exist, they are associated with optimal long-run labor income taxes close to 100%. We show that these conclusions are related to strong anticipatory effects of future tax changes.

PUBLICATIONS

Online Estimation of DSGE Models

(with Marco Del Negro, Edward Herbst, Ethan Matlin, Reca Sarfati, and Frank Schorfheide) *The Econometrics Journal*: Volume 24, Issue 1, Jan 2021, Pg. C33-C58

DSGE Forecasts of the Lost Recovery

(with Marco Del Negro, Marc P. Giannoni, Abhi Gupta, Pearl Li, and Erica Moszkowski) *International Journal of Forecasting*: Volume 35, Issue 4, Oct-Dec 2019, Pg. 1770-1789

Awards	Alfred P. Sloan Foundation Pre-Doctoral Fellowship in Behavioral Macroeconomics Graduate Fellowship (Northwestern University) Award for Excellence in Economics (Single awardee from NYU Stern)	2023-2025 2019-23 2017
RESEARCH EXPERIENCE	Research Assistant, Prof. Matthias Doepke, Northwestern University Research Assistant, Prof. Matthew Rognlie, Northwestern University Senior Research Analyst, Dr. Marco Del Negro, Federal Reserve Bank of New York Research Assistant, Prof. Tim Christensen, New York University	2022-23 2021-22 2017-19 2016-17
TEACHING EXPERIENCE	Intermediate Macroeconomics, Prof. Mark Witte, Northwestern University Intermediate Macroeconomics, Prof. Giorgio Primiceri, Northwestern University	2023 2021
OTHER EXPERIENCE	Visiting Scholar, Federal Reserve Bank of Chicago Research Officer, International Monetary Fund	2024 2022

PROGRAMMING Python, Julia, Matlab

LANGUAGES English (native), Chinese (basic)

REFERENCES Professor Matthias Doepke

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