Michael Cai

Northwestern Economics

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www.michaelcai.com Citizenship: USA

RESEARCH INTERESTS Macroeconomics, Behavioral Economics, Time-series Econometrics

EDUCATION

Ph.D in Economics, Northwestern University

2025 (expected)

2017

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

Job Market Paper

Macro Inertia and the Variable Lags of Policy Transmission

This paper quantifies the sources of macroeconomic inertia that are within and outside of policymakers' influence and uncovers novel mechanisms for how policy rules can reduce inertial policy transmission ("lags"). I introduce an approach to parameter identification in dynamic structural models, replacing traditional assumptions on expectation formation with expectations data. This permits the decomposition of inertia due to policy-invariant primitives, such as preferences and technologies, from that due to policy-variant expectations. Applied to textbook consumption-savings models, I find no empirical support for classic sources of preference inertia, such as habits. Instead, only three simple features are required to jointly match consumption and expectations data: 1) a high current MPC $\simeq 0.2$, 2) a low EIS $\simeq 0.1$, and 3) persistent over-extrapolation of expectations. I then study policy counterfactuals in a HANK model with Bayesian learning, disciplined by these findings. Inertia emerges endogenously when a measure of "belief feedback" is high, occurring precisely when the current MPC is high and EIS is low. Otherwise, inertia is absent. Responsive monetary and fiscal policy shortens transmission lags by reducing effective "feedback". In turn, monetary-fiscal interactions result in a novel government debt stabilization motive: shortening the debt repayment timeline diminishes belief feedback from inertial past expectations into future realized demand.

SELECTED WORKS IN PROGRESS

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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