Michael Cai

| Placement Director: | Professor Alessandro Pavan | 847-491-8266 | alepavan@northwestern.edu |
| Placement Administrator: | Lola Ittner | 847-491-5213 | econjobmarket@northwestern.edu |

CONTACT INFORMATION

Department of Economics
Northwestern University
2211 Campus Drive
Evanston, IL 60208

Mobile: 832-758-7670
michaelcai@u.northwestern.edu
www.michaelcai.com
Citizenship: USA

RESEARCH INTERESTS

Macroeconomics, Behavioral Economics, Time-series Econometrics

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

HANK with Actual Expectations Explains the Inertia Puzzle

The inertial response of aggregate variables to sudden shocks is a fact that many macroeconomic models struggle to explain. While several theories of bounded rationality have been proposed to justify this inertia, no consensus has emerged among them. I show canonical heterogeneous agent models — Blanchard (1985) perpetual youth and Bewley (1986) incomplete markets — can match this fact by directly using expectations data instead of model-based expectations within a semi-structural estimation framework. To analyze the determinants and policy implications of macroeconomic inertia, I then adopt a model of boundedly-rational Bayesian learning, which can explain patterns of forecast errors in expectations data that prior theories struggle to account for. Incorporating this into a heterogeneous-agent New Keynesian (HANK) environment, I provide a theory for how inertia arises endogenously. Inertia occurs due to delayed amplification of an initial shock and persists due to self-reinforcing expectations that gradually unanchor. I consider two dimensions of government policy 1) responsiveness to fluctuations, e.g. the slope of the Taylor rule, and 2) speed of government debt repayment and show how systematic changes along these dimensions can reduce the degree of inertia.

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	2023-2025
	Graduate Fellowship (Northwestern University)	2019–23
	Award for Excellence in Economics (Single awardee from NYU Stern)	2017

RESEARCH EXPERIENCE	Research Assistant, Prof. Matthias Doepke, Northwestern University	2022-23
	Research Assistant, Prof. Matthew Rognlie, Northwestern University	2021-22
	Senior Research Analyst, Dr. Marco Del Negro, Federal Reserve Bank of New York	2017–19
	Research Assistant, Prof. Tim Christensen, New York University	2016-17

TEACHING EXPERIENCE	Intermediate Macroeconomics, Prof. Mark Witte, Northwestern University	2023
	Intermediate Macroeconomics, Prof. Giorgio Primiceri, Northwestern University	2021

OTHER EXPERIENCE	Visiting Scholar, Federal Reserve Bank of Chicago	2024
	Research Officer, International Monetary Fund	2022

PROGRAMMING   Python, Julia, Matlab

LANGUAGES   English (native), Chinese (basic)

REFERENCES

Professor Matthias Doepke
Department of Economics
London School of Economics
Houghton Street
London, England WC2A 2AE
m.doepke@lse.ac.uk

Professor George Marios Angeletos
Department of Economics
Northwestern University
2211 Campus Drive
Evanston, IL 60208
angeletos@northwestern.edu

Professor Matthew Rognlie
Department of Economics
Northwestern University
2211 Campus Drive
Evanston, IL 60208
matthew.rognlie@northwestern.edu

Last updated: October 2024