# Naoya Nagasaka

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## Education

Ph.D. Student in Economics, Indiana University, 2020–Present.

M.A. in Economics, Keio University, 2018–2020.

B.A. in Economics, Keio University, *Summa Cum Laude*, 2014–2018.

## Fields of Interest

Macroeconomics, Econometrics.

## Research

*Working Papers*

Feedback in Regime Formation

> Best Young Scholar Award at the International Symposium on Econometric Theory and Applications (SETA) 2024

> This paper proposes regime-switching state space models with feedback from lagged continuous state variables to regime formation. Regime transition probabilities implied from such a regime rule can be incorporated into the Kalman filter with regime-switching coefficients. It is shown that the truncation step introduced in the filter to circumvent the path dependence problem has an asymptotically negligible impact on the resulting log likelihood. Consistency of the maximized likelihood estimator can be established as well. Two simulation exercises confirm the finite sample performance of the filter. I then study the monetary-fiscal policy mix using the regime-switching DSGE model with the proposed regime determination rule to archive a better forecasting performance especially around the time when a regime change is likely.

Estimating the Missing Intercept (with Christian Matthes and Felipe Schwartzman)

> Microeconometric approaches to answer macroeconomic questions regularly use time fixed effects. This leads to the well-known 'missing intercept' problem because fixed effects soak up average aggregate effects. As such, these results cannot be used to directly address policy questions requiring knowledge of policies' aggregate effects. We

present a statistical approach that leverages knowledge of these microeconometric results to jointly identify aggregate and idiosyncratic effects of changes in policy. We then apply our methodology to study government spending multipliers (Nakamura and Steinsson, 2014).

## Research Experience

Research Assistant for Professor Christian Matthes, 2024.

Adjunct Researcher, Faculty of Economics, Keio University, 2020.

Adjunct Research Fellow, Research Institute of Capital Formation, Development Bank of Japan, 2019–2020.

Research Assistant, Tokyo Foundation for Policy Research, 2018–2019.

## Teaching Experience

Associate Instructor (full teaching responsibility), Indiana University

E370: Statistical Analysis for Business and Economics, Fall 2024.

Teaching Assistant/ Graduate Assistant, Indiana University

E571: Econometrics I (graduate)
E672: Macroeconometrics (graduate)
B251: Fundamentals of Economics for Business I
B252: Fundamentals of Economics for Business II
E370: Statistical Analysis for Business and Economics

Teaching Assistant, Keio University

Introduction to Economic History
Historical Perspective of Economic Analysis
Corporate Finance
Independent Research Project

## Honors, Awards, & Fellowships

Best Young Scholar Award, International Symposium on Econometric Theory and Applications (SETA), 2024.

Lloyd Orr Dissertation Fellowship, Department of Economics, Indiana University, 2024.

Travel Award, College of Arts and Sciences, Indiana University, 2023.

Best Graduate Paper Award, Hoosier Economic Conference, 2023.

Henry M. Oliver Award (for excellence in economic theory), Department of Economics, Indiana University, 2023.

Graduate Fellowship (for distinguished applicants), College of Arts and Sciences, Indiana University, 2020–2021.

Research Encouragement Scholarship for Graduate Students, Keio University, 2018–2019.

Shinzo Koizumi Scholarship for Graduate Students, Keio University, 2018–2019.

Distinguished Undergraduate Thesis Award, Faculty of Economics, Keio University, 2018.

## Presentation

2024: International Symposium on Econometric Theory and Applications (SETA)

2023: Hoosier Economic Conference, Midwest Econometrics Group (MEG) Meeting

## Refereeing Service

Journal of Applied Econometrics.

## Skills

Software: Matlab, Julia, Fortran, R, Python, Stata, Eviews, LaTeX.

Language: English (Fluent), Japanese (Native).