# **MOTOHIRO KUMAGAI**

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#### **BROWN UNIVERSITY**

Placement Director: Toru Kitagawa Toru\_KitaGAWA@BROWN.EDU 401-863-3836 Graduate Administrator: Angelica Spertini ANGELICA\_SPERTINI@BROWN.EDU 401-863-2465

# **Office Contact Information**

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Department of Economics 64 Waterman Street., Box B +1-401-345-9892 412 Hope Street, Floor 2 Providence, RI, 02906 +1-401-660-0729

# **Personal Information:**

Citizenship: Japan

# **Pre-Doctoral Studies:**

Bachelor's Degree in Economics, Hitotsubashi University, Japan, 2013 Master's in Economics, Hitotsubashi University, Japan, 2015

# **Graduate Studies**:

Brown University, Providence, RI, USA 2016 to present

Ph.D. Candidate in Economics

Thesis Title: Essays on the Biogeographical Origins of Economic Development

Expected Completion Date: May 2023

### References:

Professor Oded Galor Professor Stelios Michalopoulos

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Professor Louis Putterman Department of Economics, Brown University

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# **Research and Teaching Fields**:

Primary fields: Growth and Development, Macroeconomics, Political Economy

# Secondary field: Cultural Economics

# **Research Experience and Other Employment:**

Summer 2018 Brown University, Research Assistant, Professor Oded Galor

#### **Professional Activities**

Oct 2020 Global Wellbeing Initiative, Discussant

Nov 2021 NEUDC, Paper Discussant

# **Conferences and Seminar Presentations**

Internal Growth Seminar at Brown University (multiple times) 2018-2022 NEUDC at Boston University 2021 Applied Young Economist Webinar at Monash University 2022 Eurasia Business and Economics Society Conference at Berlin, Oct 2022 SEA Annual Meeting, Nov 2022 (in schedule)

# Honors, Scholarships, and Fellowships:

2016-2019 Japan Student Services Organization Scholarship
2019 Third Year Paper Distinction Award, Brown University
Spring 2021 Merit Dissertation Fellowship, Brown University

# **Research Papers:**

"Overkill, Extinction, and the Neolithic Revolution" (Job Market Paper)

Abstract: This research explores the biogeographical origins of the emergence and diffusion of agriculture. I develop a model showing that large-herbivore extinction decreased hunting gains and permitted an earlier agricultural transition. It also shows that mammals' biological vulnerability increased the extinction risk and promoted an earlier transition. To test the predictions, I construct a novel measure of the loss of hunting resources resulting from mammal extinction. Using multiple datasets and exploiting the biological vulnerability as an instrument for the extinction, the research establishes a positive impact of the extinction on the timing and the likelihood of the agricultural transition. It also shows a persistent effect of the prehistoric extinction on socioeconomic development that lasted until the preindustrial period.

# "Horses and the State"

Abstract: This research explores the effect of horses on the state and historical battles. It exploits multiple exogenous sources of variation in the adoption of horse riding on the battlefield: (i) the exogenous regional variation in the spread of horse-riding technology, (ii) the exogenous variation in the availability of native horses, and (iii) the exogenous change in horse availability in the Americas during the Columbian Exchange. The research, using these exogenous variations and multiple datasets spanning several millennia, provides repeated evidence of the significant impact of horses on state formation and historical battles. Rich historical accounts support the critical role of horses in state formation through their influence as a military power.

#### "Biogeographical Origins of Risk Preference"

Abstract: This paper explores the biogeographical origins of differences in risk preference across regions and individuals. The theory shows that individuals whose ancestors lived in regions with abundant hunting resources tend to be more risk averse. Such regions attracted even risk-averse individuals, and thus the population became more risk averse. To test the hypothesis, I construct a novel measure of megaherbivore biomass. This measure is a strong predictor of hunting dependency in traditional societies. I show that consistent with the theory, descendants of inhabitants of regions characterized by larger megaherbivore biomass have higher risk aversion.

#### **Work in Progress**

"American Prosperity: The Role of Upper-Tail Human Capital"

Description: This research examines the effect of upper-tail human capital on income, education, and research productivity. It also explores the effect of upper-tail human capital on the evolution of values for science. The context of the analysis is immigrants to America. To address the endogeneity of the location choices of immigrants with upper-tail human capital, I conduct an estimate based on the "shift-share" instrumental variable methodology. I find that counties that have more immigrants with upper-tail human capital tend to have higher income, education, and research productivity. I also find that individuals who reside in a county that historically have more immigrants with upper-tail human capital tend to put more importance on science.

"Human Admixture: The Short- and Long-Run Impacts on Economic Development"

Description: Admixture is the mixing of different populations. It can be regarded as the degree of mixing in terms of cultural aspects. This study explores admixture's short- and long-run effects on economic development. The admixture reduces social cohesion and leads to mistrust. Therefore, it can be harmful to economic development in the short run. The admixture increases population diversity, and thus it raises productivity. Social cohesion improves over time through the assimilation process. Hence, the admixture can benefit economic development in the long run. This research, using novel data on human admixture, demonstrates that the admixture is negatively associated with development in the short run. It further shows that the association is positive in the long run.

# **Teaching Experience**

2013	Introductory Microeconomics @Hitotsubashi University, Teaching Assistant
2014	Introduction to Economics @Hitotsubashi University, Teaching Assistant
2015	Basic Economic Mathematics @Hitotsubashi University, Teaching Assistant
2015	Introductory Microeconomics @Hitotsubashi University, Teaching Assistant
2016	Advanced Macroeconomics @Hitotsubashi University, Teaching Assistant

#### Languages

English (fluent), Japanese (native)

#### Software

Python, ArcGIS, STATA, Matlab, LaTex