### **MOTOHIRO KUMAGAI**

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#### **BROWN UNIVERSITY**

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### **Office Contact Information**

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#### **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 in the Biogeographical Origins of Economic Development

Expected Completion Date: May 2023

#### References:

Professor Oded Galor Professor Stelios Michalopoulos

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# **Research and Teaching Fields:**

Primary fields: Economic Growth, Comparative Development

Secondary fields: Cultural Economics, Political Economy, Economic History

## **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, Oct 2022 (in schedule) SEA Annual Meeting, Nov 2022 (in schedule)

#### Honors, Scholarships, and Fellowships:

Japan Student Services Organization Scholarship
 Third Year Paper Distinction Award, Brown University
 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. I exploit 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 course of the Columbian Exchange. Using these exogenous variations and multiple datasets spanning several millennia, the research 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 building 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 that had 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. I find that this measure is a strong predictor of hunting dependency in traditional societies. I show that, consistent with the theory, decendants 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: In this study, I examine the effect of upper-tail human capital on (i) income, education, and research productivity; and (ii) the values for science. The analysis is conducted within the context of immigrants to America who has the upper-tail human capital. 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. It demonstrates that (i) both in the short and long run, counties that have more immigrants who have upper-tail human capital tend to have higher income, education, and research productivity; and (ii) individuals who reside in a county that historically have more immigrants who have 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 by definition genetic mixing. However, the degree of admixture can be regarded as the degree of mixing in terms of both genes and culture. In this study, I explore the short- and long-run effects of genetic and cultural mixing on economic development. In the short run, the admixture can be bad because it reduces social cohesion and leads to mistrust. However, the admixture can be good in the long run because: (i) it increases population diversity, which raises productivity (Ashraf and Galor, 2013); and (ii) social cohesion improves through the assimilation process. Using the novel data on human admixture by Hellenthal et al. (2014), I test this hypothesis. I demonstrate that human admixture is negatively associated with development in the short-run while the association is positive in the long run.

## **Teaching Experience**

Before 2015 In

Intermediate Microeconomics @Hitotsubashi University, Teaching Assistant to Professor Shinichi Takekuma (multiple times)
Advanced Macroeconomics @Hitotsubashi University, Teaching Assistant to Professor Takashi Kano

#### Languages

English (fluent), Japanese (native)

#### Software

Python, ArcGIS, STATA, Matlab, LaTex