BIAN XIAOYU

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EDUCATION

2019.08-present: ***Ph.D candidate in Economics*** , The Chinese University of Hong Kong
2017.09-2019.07: ***Master in Economics*** , Nankai University
2013.09-2017.07: ***B.A in Economics*** , Nankai University

RESEARCH INTERESTS

Applied Economics; Political Economy; Development Economics; Economic History; Economic Geography

JOB MARKET PAPER

• **"Politics-driven Market Access and Its Cost:Evidence from China's Grand Canal."** (with Ying Bai and Ruixue Jia).

– This study adopts the market access approach in spatial economics, examining the historical case of China's Grand Canal in the context of national capital relocations from Tang to Qing Dynasties. Using a grid-year level panel data covering the 8th century to 19th century, we find that (1) the national capital was relocated from the China central (the Tang and Song dynasties) to China north (Yuan, Ming and Qing dynasties) resulted in the redefinition of the Grand Canal to directly connect the national capital to the properous China south. Specifically, the optimal route to the national capital could predict the actual canal route. (2) It also changed each region's market access and hence reshape the economic geography. 1% increase in market access and lead to 0.14% increase in population density. (3) Overall, The politics-driven canal construction enhance the aggregate welfare. Counterfactual analysis show that removing all canals could lead to 4% - 11% percent decrease in total population, which shows that although the canal route is motivated by political consideration, it still benifits the overall economy. (4) But, it also caused misallocation. If we assume that Ming and Qing dynasties adopted the Song canal, it is observed 2.5% - 4% increase in total population. This paper not only examines how politics determine the positioning of transportation networks and consequently regional economic development but also the change of aggregate welfare, allowing us to evaluate the cost of politics-driven transportation networks.

WORKING PAPER

• **"The Impact of Robots on College Enrollment in China: A Perspective on Employment Polarization."** (with Guangsu Zhou and Songyuan Qiao), Revised & Resubmit at ***Economic Development and Cultural Change.***

• **"The Retreat of Mammals: Agricultural Expansion, Environment Degradation, and Economic Growth."** (with Ying Bai and Ruixue Jia).

– Using a grid-year level panel data from the 16th to 20th centuries, this study documents the correlations between agricultural expansion and environmental degradation, especially identifies the feedback effect of negative environmental externality on economic growth. We first show that population density was correlated with less mammal species and more land erosion conditions in the Ming-Qing dynasties. We also find that upland populations contribute less to local populations compared to lowland populations, which may be offset by the negative environmental externalities of upland reclamation. Then, we take the historical case of widespread maize cultivation in the mountainous regions in the context of intensive population-farmland conflict in the Qing dynasty as the agricultural expansion shock. We find that: (1) maize cultivation has a significant negative correlation with mammal species number, and a significant positive correlation with historical land erosion measure. (2) Upland maize cultivation significantly declined local population density, while lowland maize cultivation not.

(3) Notably, the negative environmental externality on population density caused by upland maize cultivation offset around 85% positive effects of maize cultivation. (4) The negative environmental externality appeared in 50 years after mountain reclamation and persisted for two centuries. (5) As a placebo test, sweet potato which was widely planted in lowland such as Guangdong and Guangxi provinces had no decline effect on population density. (6) Upland maize cultivation has a significant negative effect on other traditional grains such as rice and wheat, suggesting that negative environmental externalities reduced population growth by destroying the plain farmland in the valleys.

PUBLICATIONS

- **"Protestantism and Agricultural Development in China."** (with Ying Bai), 2026. *In: Chen, Z., Campbell, C., Ma, D. (eds) Quantitative History of China. Studies in Economic History. Springer, Singapore*.
- **"The Effects of Robots on Internal Migration:Evidence from China."** (with Guangsu Zhou), 2024. *Journal of Regional Science*, 64(3), 840–865.
- **"The impact of intergenerational income mobility on internal migration in China."** (with Guangsu Zhou), 2024. *Economics of Transition and Institutional Change*, 32(1), 183–208.
- **"The effect of inequality of opportunity (IO) on housing accessibility: Evidence from China."** (with Guangsu Zhou), 2021. *Habitat International, 116*, 102414.
- **"Personal Early Experience and Household Investment on Risky Financial Assets: An Empirical Analysis Based on the "Going Up to the Mountains and Down to the Countryside" Movement in China."** (with Guangsu Zhou and Qingjun Wu), 2020. *Journal of Financial Research (in Chinese)*, 475(1), 150–170.

AWARDS

- Postgraduate Scholarships, 2019–2023

TEACHING EXPERIENCE

- **Teaching Assistant(Tutorial)**

– Econometric Theory and Applications (Msc program, 2023-2024,2024-2025,2025-2026)

SKILLS AND LANGUAGES

- Stata, R, ArcGIS, Matlab(computation and simulation)
- Chinese (Native), English (Fluent)

REFERENCES

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