

# IDE Research Bulletin

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Research Summary based on papers prepared for publication  
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## **Economic division in British India: An analysis of population dynamics**

Project Organizer

TSUBOTA Kenmei

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**IDE-JETRO**

# Economic division in British India: An analysis of population dynamics

## Organizer:

Kenmei TSUBOTA (Overseas Research Fellow)

## Co-researchers:

Abu SHONCHOY (Microeconomic Analysis Studies Group, Development Studies Centre),

Souknilanh KEOLA (Economic Integration Studies Group, Inter-disciplinary Studies Center)

- Outputs of the project

This research project produced two papers. One is “Partition, Independence, and Population Geography in Bengal” as the main research paper for this project. The other is “Some Notes on the Spatial Representations”, which is a technical note for the construction of spatial variables.

- Brief summary of the project

International borders split spaces into different countries and add obstacles for trans-national transactions. The emergence of international borders in South Asia, where it was British India, after 1947 made substantial changes and has formed different countries. The purpose of this research project is to formally investigate

the impacts of the emergence of “international border” and quantify the impacts by observing the dynamics of population distribution.

There is a theoretical prediction on the outcome of economic division. New Economic Geography emphasizes the agglomeration of economies through market access. Since economic division increases the trade costs and transport costs for international transactions, it negatively affects the market access of all regions. While border regions particularly negatively affected by losing proximate market, relative position of regions which are far from the international border increases and they could benefit from the economic division. This is the phenomena this research project investigates.

One of the challenges in this project was the data construction. During the last two years, we have gathered relevant census data and comparable data for further analysis. From the census volumes, we have gathered, scanned and digitalized the relevant tables. The data included the digitalization of district maps at British period. This task required lots of efforts. We have tried our best to collect the data other than census, which include materials classified in India Office Records.<sup>1</sup>

From this research project, we have finalized two papers. One is “Partition, Independence, and Population Geography in Bengal” and the other is “Some Notes on the Spatial Representations.” First paper is the main research in this project and the second paper is a technical note for the analysis with spatial variables.

### **“Partition, Independence, and Population Geography in Bengal”**

Bengal Province in British India was partitioned in 1947 based on a

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<sup>1</sup> Some of the statistics appeared in the colonial reports have subsequent statistics in the postcolonial period. However, it is not straightforward to connect such data. For example, literal person is not same across all census year since criteria to be literal is different at least before and after 1980 in East Bengal region.

broadly-defined religion-based ruling. While West Bengal remained in India, which is a Hindu majority area, East Bengal became a part of Pakistan, a predominantly Muslim region. This emergence of an international border in the middle of Bengal not only resulted in a change in the name of the eastern part to East Pakistan, but caused substantial changes in migration, economic flows and population distribution. Subsequently, East Pakistan became independent in 1971 as Bangladesh.

This study quantitatively explores the changing population geography in Bengal, with a particular focus on the events of 1947 and 1971. Based on decadal census data from 1901 to 2001 at the district level, this paper explores how trends in regional population growth evolved with such historical events. Following Redding and Sturm (2008), Differences-in-Differences estimation is also employed here and the events of 1947 and 1971 are taken as the subjects of the test. We specifically analysed the East-West border in Bengal. See Figure 1 for the map of Bengal and the international border and the East-West border.<sup>2</sup>

Estimation results show that there were different shocks on both sides and from both events. In West Bengal, the change in the regional population trends occurred in 1947 and remained similar thereafter. On the other hand, in East Bengal, this did occur clearly after 1971. Further robustness checks show that the impacts were not uniform with respect to the distance from the border. Overall analyses show that the emergence of the international border in Bengal had

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<sup>2</sup> The East-West border in Bengal, which is a part of the international border between Bangladesh and India has been selected for use here. There are two main reasons for this choice. Firstly, the geographical focus of this paper is the partition of Bengal. Accordingly, the border divides the region called Bengal. To larger extent, the regional government of Bengal included Assam and the North Eastern Indian States. However, these regions were always separate states or provinces and there are no reasons for considering them as parts of Bengal. The remainder of the Bangladesh-India international border was not within Bengal but delineated Assam, Tripura State, and Upper Burma in colonial times and delineates Assam, Meghalaya, and Tripura at present.

asymmetric impacts on both sides of the population geography.

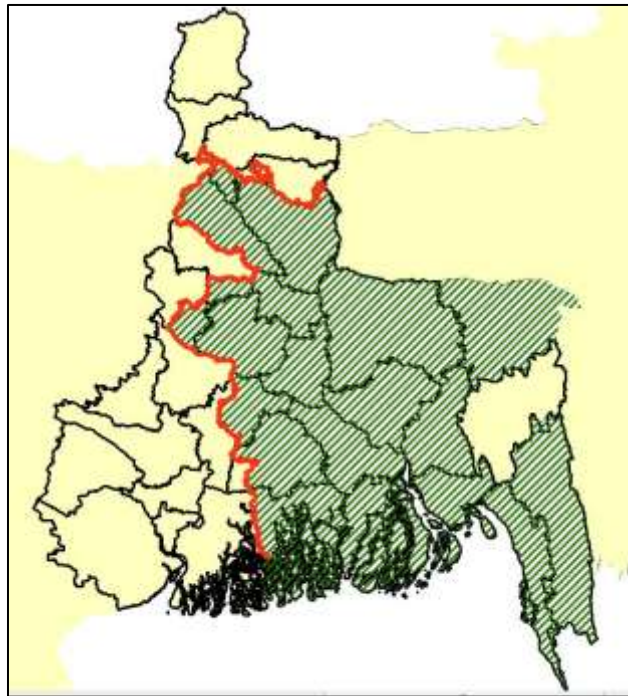


Figure 1. District boundary of Bengal in 1947

Source: Author's cartography

Notes: Red line shows the East-West border and black shaded regions are the East Bengal. District boundary is based on Census of India (1931).

### **"Some Notes on the Spatial Representations"**

There are conventional methods to calculate the centroid of spatial units and distances among them with using Geographical Information Systems (GIS). The paper points out potential measurement errors of this calculation. By taking Indian district data as an example, systematic errors concealed in such variables are shown. Two comparisons are examined; firstly, we compare the centroid obtained from the spatial units, polygons, and the centre of each city where its district headquarters locates. Secondly, between the centres represented in the above, we

calculate the direct distances and road distances obtained from each pair of two districts. From the comparison between the direct distances of centroid of spatial units and the road distances of centre of district headquarters, we showed the distribution of errors for the use of conventional variables obtained from GIS.

Further elaboration of both studies may bring additional scopes of analysis in each direction. From this research project, the authors found strong possibility to extend research scope and further development of the project. The study on the partition in India shall be continued under different project or extended to include studies in other regions in the world.