# SUPPLEMENTARY MATERIAL

# THE LONG-RUN CONSEQUENCES OF THE OPIUM CONCESSIONS FOR OUT-GROUP ANIMOSITY ON JAVA

By Nicholas Kuipers

World Politics doi: 10.1017/S0043887122000041

Replication data are available at:

Kuipers, Nicholas. 2022. "Replication data for: The Long-Run Consequences of the Opium Concessions for Out-Group Animosity on Java." Harvard Dataverse, V l. doi: 10.7910/DVN/D6IBFJ.

# Supplementary Material

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### A Data

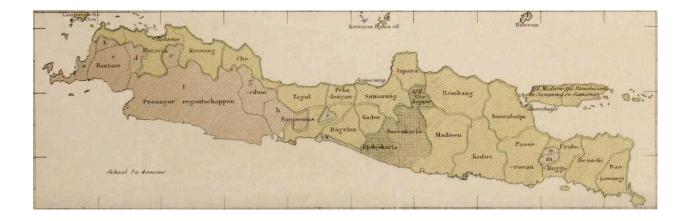
### A.1 Independent variable

Central to the research design outlined in this paper is the precise identification of present-day villages within the historical catchments of the opium farm system. The process for identifying these villages—and their distance to the border—first involved tracing historical boundaries onto contemporary ones. This meant drawing on a high-resolution digitization of a map that outlines the extent of the opium farm system from 1882, housed in the Leiden University archives, Kaart van den Indischen Archipel: Aangevende de bestaanden toestand met betrekking tot de gouvernementsmonopolin van opium en zout. (1882).

One critical decision involved in this process was identifying the projection system of the original nineteenth century map. While contemporary maps can be easily transformed through digital processes, in earlier representations—such as the map on which this project relies—mapmakers did not articulate the "projection system" used. I therefore assume a WGS84 projection system in overlaying the rasterized image of the map onto contemporary Java.

# A.1.1 Original Map

Figure A1—Opium Farm System on Java and Madura (1809–1894), Original Map



Source: Kaart van den Indischen Archipel: Aangevende de bestaanden toestand met betrekking tot de gouvernementsmonopolien van opium en zout. (1882).

#### A.2 Outcome Data

1. "What do you think if people who have different faith from you build a house of worship in your community?"

$$Y_i = \begin{cases} 1 & \text{if "Strongly objected" or "Objected"} \\ 0 & \text{if "No objection" or "No objection at all"} \\ \text{NA} & \text{otherwise} \end{cases}$$

2. "How do you feel if someone with different faith from you live in your village"

$$Y_i = \begin{cases} 1 & \text{if "Strongly objected" or "Objected"} \\ 0 & \text{if "No objection" or "No objection at all"} \\ \text{NA} & \text{otherwise} \end{cases}$$

3. "How do you feel if someone with different faith from you live in your neighborhood?"

$$Y_i = \begin{cases} 1 & \text{if "Strongly objected" or "Objected"} \\ 0 & \text{if "No objection" or "No objection at all"} \\ \text{NA} & \text{otherwise} \end{cases}$$

4. "How do you feel if someone with different faith from you rent a room from you?"

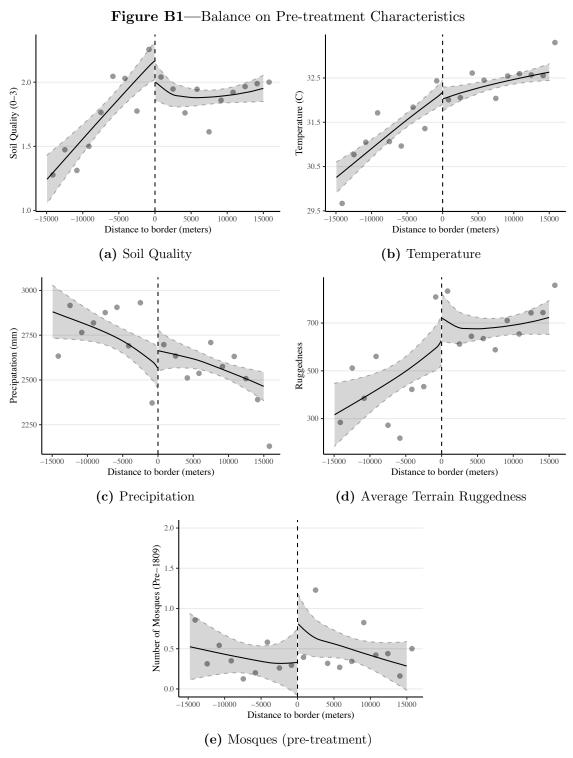
$$Y_i = \begin{cases} 1 & \text{if "Strongly objected" or "Objected"} \\ 0 & \text{if "No objection" or "No objection at all"} \\ \text{NA} & \text{otherwise} \end{cases}$$

# A.3 Summary Statistics

Table A1—Summary Statistics

| Statistic                             | N          | Mean            | St. Dev.    | Min             | Pctl(25)   | Pctl(75)    | Max            |
|---------------------------------------|------------|-----------------|-------------|-----------------|------------|-------------|----------------|
| Dependent Variables:                  |            |                 |             |                 |            |             |                |
| Place of Worship (% Intolerant)       | 32,350     | 0.578           | 0.494       | 0.000           | 0.000      | 1.000       | 1.000          |
| Living in Village (% Intolerant)      | 32,350     | 0.223           | 0.416       | 0.000           | 0.000      | 0.000       | 1.000          |
| Living in Neighborhood (% Intolerant) | 32,350     | 0.225           | 0.418       | 0.000           | 0.000      | 0.000       | 1.000          |
| Renting Room in Home (% Intolerant)   | $32,\!350$ | 0.479           | 0.500       | 0.000           | 0.000      | 1.000       | 1.000          |
| Independent and Control Variables:    |            |                 |             |                 |            |             |                |
| Age                                   | 32,414     | 37.444          | 15.003      | 14.000          | 26.000     | 47.000      | 101.000        |
| Latitude                              | 31,882     | -5.605          | 3.113       | -16.037         | -7.749     | -4.364      | 4.024          |
| Longitude                             | 31,882     | 109.154         | 7.742       | 0.000           | 106.635    | 113.115     | 121.022        |
| Rugged (% $x$ 1000)                   | 30,945     | 651.285         | 682.932     | 1.000           | 105.000    | 990.000     | 3,502.000      |
| Temperature (C)                       | 31,717     | 31.473          | 1.869       | 22.300          | 31.000     | 32.800      | 35.000         |
| Precipitation (mm)                    | 31,717     | $2,\!321.455$   | 553.424     | 1,104.000       | 1,926.000  | 2,643.000   | $4,\!298.000$  |
| Soil Quality (1-7)                    | 31,882     | 1.734           | 0.932       | 0.000           | 1.000      | 3.000       | 7.000          |
| Gini (0-1)                            | 29,888     | 0.425           | 0.210       | 0.000           | 0.342      | 0.573       | 0.859          |
| Forcing (meters)                      | 31,882     | $320,\!408.600$ | 689,985.700 | $-84,\!328.770$ | 21,877.490 | 441,842.900 | 11,770,950.000 |

# B Balance Tests

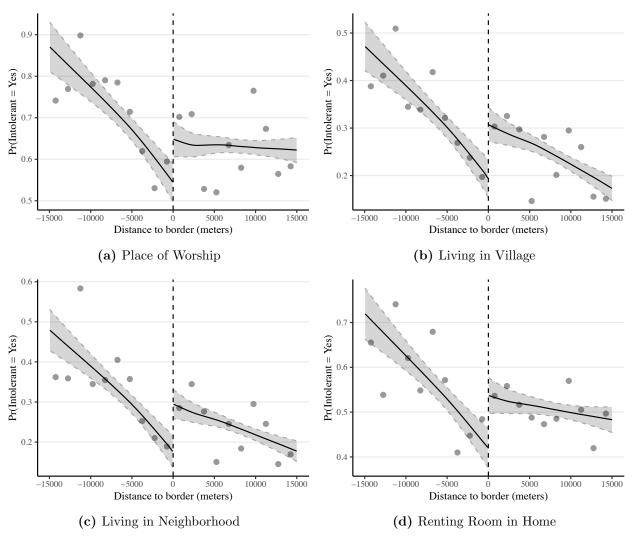


*Note*: Local linear regression, with binned averages every 1500 meters. (a) Average Terrain Ruggedness is a measure of the proportion of land on a slope, (b) Temperature is the average yearly temperature, (c) is the logged annual average rainfall, and (d) is the soil quality, as measured on a seven point scale.

# C Additional Tests

## C.1 Main Effects, Cluster-Collapsed Analysis

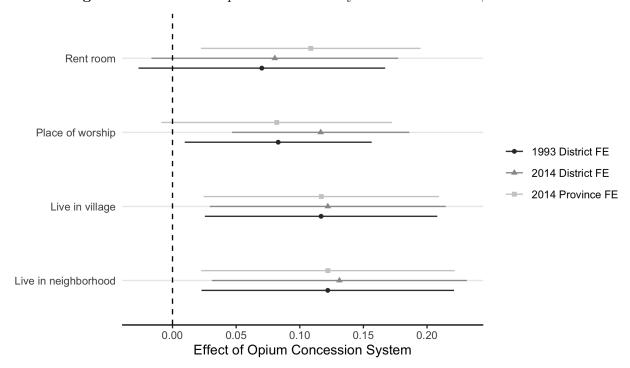
Figure C1—Effect of Opium Concession System on Intolerance, Local Linear Regression



Note: Local linear regression, with respondent-weighted binned averages every 1500 meters. The outcomes are drawn from a battery of questions that asked respondents if they would be upset or protest if a member of another religion (1) tried to build a place of worship nearby, (2) lived in their village, (3) lived in their neighborhood, or (4) rented a room in their house. Outcomes were collapsed to the cluster level, and local linear regression performed with clusters weighted to the number of respondents in each.

# C.2 Main Effects, with Geographic Fixed Effects

Figure C2—Effect of Opium Concession System on Intolerance, Fixed Effects



# C.3 Main Effects, with Border Controls

Table C2—Effect of Opium Farm System on Ethnic Intolerance, Border Latitude and Longitude Controls

|                 | Dependent variable:                                |                    |                      |                    |  |  |  |  |  |
|-----------------|--|--------------------|----------------------|--------------------|--|--|--|--|--|
|                 | Would you protest if a member of another religion: |                    |                      |                    |  |  |  |  |  |
|                 | Place of worship                                   | Live in village    | Live in neighborhood | Rents room         |  |  |  |  |  |
| Panel A: 2500m  |  |                    |                      |                    |  |  |  |  |  |
| Opium Legal     | $0.162^{*}$  | -0.042             | -0.077               | 0.059              |  |  |  |  |  |
|                 | (0.091)  | (0.078)            | (0.086)              | (0.077)            |  |  |  |  |  |
| Observations    | 759  | 759                | 759                  | 759                |  |  |  |  |  |
| Bandwidth       | $2500 \mathrm{m}$                                  | $2500 \mathrm{m}$  | $2500 \mathrm{m}$    | $2500 \mathrm{m}$  |  |  |  |  |  |
| Panel B: 5000m  |  |                    |                      |                    |  |  |  |  |  |
| Opium Legal     | 0.235***   | 0.066              | 0.086                | 0.047              |  |  |  |  |  |
| •               | (0.069)  | (0.063)            | (0.076)              | (0.059)            |  |  |  |  |  |
| Observations    | 1731   | 1731               | 1731                 | 1731               |  |  |  |  |  |
| Bandwidth       | $5000 \mathrm{m}$                                  | $5000 \mathrm{m}$  | $5000 \mathrm{m}$    | $5000 \mathrm{m}$  |  |  |  |  |  |
| Panel C: 7500m  |  |                    |                      |                    |  |  |  |  |  |
| Opium Legal     | 0.201***   | 0.151**            | 0.169**              | 0.168***           |  |  |  |  |  |
| •               | (0.051)  | (0.063)            | (0.068)              | (0.064)            |  |  |  |  |  |
| Observations    | 2595   | 2595               | 2595                 | 2595               |  |  |  |  |  |
| Bandwidth       | $7500 \mathrm{m}$                                  | $7500 \mathrm{m}$  | $7500 \mathrm{m}$    | $7500 \mathrm{m}$  |  |  |  |  |  |
| Panel D: 10000m |  |                    |                      |                    |  |  |  |  |  |
| Opium Legal     | 0.130**  | 0.134**            | 0.143**              | 0.121**            |  |  |  |  |  |
| 2               | (0.053)  | (0.057)            | (0.061)              | (0.055)            |  |  |  |  |  |
| Observations    | 3391   | 3391               | 3391                 | 3391               |  |  |  |  |  |
| Bandwidth       | $10000 \mathrm{m}$                                 | $10000 \mathrm{m}$ | $10000 \mathrm{m}$   | $10000 \mathrm{m}$ |  |  |  |  |  |

Note: \*p<0.01; \*\*p<0.05; \*\*\*p<0.01. Beta coefficients from OLS regression. Border latitude and longitude areas included as controls. Conventional standard errors clustered at the village level. The outcomes are drawn from a battery of questions that asked respondents if they would be upset or protest if a member of another religion (1) tried to build a place of worship nearby, (2) lived in their village, (3) lived in their neighborhood, or (4) rented a room in their house.

# C.4 Main Effects, with Soil and Precipitation Controls

Figure C3—Effect of Opium Concession System on Intolerance, Land Controls

