README: "Family Ties, Social Control, and Authoritarian Distribution to Elites"

Overview

This replication package contains the code necessary to reproduce all tables and figures in the article "Family Ties, Social Control, and Authoritarian Distribution to Elites" by Antonella Bandiera, Horacio Larreguy, and Jorge Mangonnet. The package consists of four folders: *code*, *data*, *figures*, and *tables*. The regression analyses are conducted in Stata, while some of the figures are generated in R. The analyses rely on ten datasets.

The first dataset provides network centrality measures at the family-municipality level (`centrality_family.dta`), constructed from Paraguayan family tree records spanning 1870–1950. The second dataset contains the beneficiaries of ill-gotten public land grants from 1954 to 2007 (`land.dta`), where each observation represents a specific ill-gotten land grant, including the year and the recipient family's municipality. The main dataset for the analysis is a balanced panel dataset (`main.dta`) spanning 1954-2007 that combines: (i) the time-invariant family centrality measures from `centrality_family.dta`, and (ii) time-varying records of ill-gotten public land grants from `land.dta`. Additionally, seven other datasets are required to run extensions of the empirical analysis and for generating figures.

Datasets

The following datasets are in the *data* folder of the replication package:

1. `centrality_family.dta`. This dataset includes network centrality measures for all Paraguayan family tree records spanning 1870-1950. It was constructed using the family tree collections web-scraped from MyHeritage. It is at the family-municipality level.
2. `land.dta`. This dataset records the ill-gotten public land grants distributed by the *Instituto de Bienestar Rural* (IBR) between 1954 and 2007. It was manually compiled from a digitized version of the original beneficiary rolls, made available by BASE-IS and sourced from the Paraguayan truth and justice commission's (CVJ, 2008) final report (*Informe Final Anive haguã oiko, Tierras Mal Habidas, Tomo IV*). Each observation represents a unique ill-gotten land grant, recording the year, recipient family, municipality, grant size, and number of plots.
3. `main.dta`. This is the main dataset, combining the information contained in `centrality_family.dta` and `land.dta`. This dataset is a balanced panel at the family-municipality-year level.
4. `centrality.dta`. This dataset includes the family network centrality measures averaged at the municipality level. It is cross-sectional dataset at the municipality level.
5. `indert.dta` This dataset includes beneficiaries of legitimate public land grants distributed by the IBR between 1954 and 2007 in the departments of Concepción

and San Pedro. The data were obtained through a formal public records request to the Paraguayan government at: `https://informacionpublica.paraguay.gov.py/#!/`. It is a panel dataset at the family-municipality-year level.

6. `anr.dta` This dataset includes the number of individuals who affiliated with the Colorado Party between 1954 and 2003. The data were extracted from the 2003 voter rolls of Colorado affiliates, retrieved from the party's headquarters in Asunción. It is structured at the municipality-quadrennium level.

7. `repression_cross.dta.` This dataset includes the number of human rights violations committed under the Stroessner dictatorship (1954–1989). The data were shared by González et al. (2024), who sourced them from Volume VIII of the CVJ (2008) final report. It is a cross-sectional dataset at the municipality level.

8. `repression_panel.dta.` This dataset expands on `repression_cross.dta` by disaggregating human rights violations by year of occurrence. It is a panel dataset at the municipality-year level.

9. `landinv.dta.` This dataset includes the number of land occupations staged by peasants between 1954 and 2007. The data were sourced from the archives of *Informativo Campesino*, collected at the library of the *Centro de Documentación y Estudios*, an agrarian studies program in Asunción. It is a panel dataset at the municipality-year level.

10. `sjn_links.RData.` This dataset includes family ties (based on intermarriage ties pairing two distinct family names) in the San Juan Nepomuceno municipality, located in the in the Caazapá department. The data were scraped from MyHeritage.

Codebook

A codebook detailing all the variables included in each dataset is presented in the file `00_codebook.pdf`, located in the *code* folder.

Statement about Rights

We certify that the authors of the manuscript have legitimate access to and permission to use the data used in this manuscript.

Summary of Availability

All the datasets used to support the findings of this study have been deposited in the APSR Dataverse repository.

Access to MyHeritage Data

- The original Paraguayan family tree records at MyHeritage, the online genealogical platform, were scraped between Spring 2019 and Fall 2020 using ParseHub, a

web-scraping freeware that extracts data on a browser-based interface. ParseHub can be downloaded here: `https://www.parsehub.com/quickstart`.

- Having unlimited access to MyHeritage family trees requires a premium annual subscription—the MyHeritage Complete Plan. For those who are interested in purchasing a premium subscription, we recommend checking the plan details at `https://www.myheritage.com/pricing/complete` or contacting their sales team at `sales@myheritage.com`.

Analysis

Software Requirements

Code for analysis was run with Stata 18 and R version 4.4.2.

Instructions to Replicators

The necessary code to reproduce all tables and figures in the article and online appendix can be found in the folder *code*. The required R packages for generating figures are installed in `figure1.R`. To reproduce the tables, install the necessary Stata packages using `00_setup.do`. Ensure that your working directory has access to the *data* folder containing all datasets and the *figures* and *tables* folders for outputs.

Code

All Stata do-files and R scripts needed to replicate the tables and figures in the article and appendix are stored in the *code* folder. All code outputs are directed to two folders: *figures* for graphical results and *tables* for tabular results.

Figures in the Article

- `figure1.R`: This file installs necessary packages, sets the working directory, and replicates Figure 1 in the article.
- `figure2.R`: This file sets the working directory and replicates Figure 2, panel (a) and panel (b), in the article.
- `figure3.R`: This file sets the working directory and replicates the network visualization example in Figure 3 in the article.
- `figure4.R`: This file sets the working directory and replicates Figure 4, panel (a) and panel (b), in the article.
- `figure5.do`: This file sets the working directory and replicates Figure 5, panel (a) and panel (b), in the article.
- `figure6.do`: This file sets the working directory and replicates Figure 6 in the article.

- `figure7.do`: This file sets the working directory and replicates Figure 7 in the article.

Tables in the Article

- `table1.do`: This file sets the working directory and replicates all panels of Table 1 in the article.
- `table2.do`: This file sets the working directory and replicates both panels of Table 2 in the article.
- `table3.do`: This file sets the working directory and replicates Table 3 in the article.
- `table4.do`: This file sets the working directory and replicates Table 4 in the article.

Figures in the Online Appendix

- `figureA2.do`: This file sets the working directory and replicates panels (a), (b), (c), and (d) of Figure A2 in the online appendix.
- `figureA3.do`: This file sets the working directory and replicates panels (a) and (b) of Figure A3 in the online appendix.
- `figureA4.do`: This file sets the working directory and replicates Figure A4 in the online appendix.
- `figureA5.do`: This file sets the working directory and replicates Figure A5 in the online appendix.
- `figureA6.R`: This file sets the working directory and replicates panels (a), (b), (c), and (d) of Figure A6 in the online appendix.
- `figureA7.do`: This file sets the working directory and replicates panels (a), (b), (c), and (d) of Figure A7 in the online appendix.
- `figureA8.do`: This file sets the working directory and replicates panels (a), (b), (c), and (d) of Figure A8 in the online appendix.
- `figureA9.do`: This files sets the working directory and replicates panels (a), (b), (c), and (d) of Figure A9 in the online appendix.

Tables in the Online Appendix

- `tableA1.do`: This file sets the working directory and replicates all panels of Table A1 in the online appendix.
- `tableA2.do`: This file sets the working directory and replicates Table A2 in the online appendix.

- `tableA3.do`: This file sets the working directory and replicates panels (a.1), (a.2), (b.1), and (b.2) of Table A3 in the online appendix.
- `tableA4.do`: This file sets the working directory and replicates panels (a), (b), and (c) of Table A4 in the online appendix.
- `tableA5.do`: This file sets the working directory and replicates panels (a), (b), and (c) of Table A5 in the online appendix.
- `tableA6.do`: This file sets the working directory and replicates panels (a), (b), and (c) of Table A6 in the online appendix.
- `tableA7.do`: This file sets the working directory and replicates panels (a), (b), and (c) of Table A7 in the online appendix.
- `tableA8.do`: This file sets the working directory and replicates panels (a), (b), and (c) of Table A8 in the Appendix.
- `tableA9.do`: This file sets the working directory and replicates Table A9 in the online appendix.
- `tableA10.do`: This file sets the working directory and replicates Table A10 in the online appendix.
- `tableA11.do`: This file sets the working directory and replicates Table A11 in the online appendix.
- `tableA12.do`: This file sets the working directory and replicates Table A12 in the online appendix.
- `tableA13.do`: This file sets the working directory and replicates Table A13 in the online appendix.
- `tableA14.do`: This file sets the working directory and replicates Table A14 in the online appendix.
- `tableA15.do`: This file sets the working directory and replicates Table A15 in the online appendix.
- `tableA16.do`: This file sets the working directory and replicates Table A16 in the online appendix.
- `tableA17.do`: This file sets the working directory and replicates Table A17 in the online appendix.
- `tableA18.do`: This file sets the working directory and replicates Table A18 in the online appendix.
- `tableA19.do`: This file sets the working directory and replicates Table A19 in the online appendix.
- `tableA20.do`: This file sets the working directory and replicates Table A20 in the online appendix.

References

Comisión de Verdad y Justicia (CVJ). 2008. "Informe Final." https://repositorio.conacyt.gov.py/xmlui/handle/20.500.14066/2772.

González, Felipe, Josepa Miquel-Florensa, Mounu Prem, and Stéphane Straub. 2024, 10 "The dark side of infrastructure: Roads, repression and land in authoritarian paraguay." *The Economic Journal 135* (666): 653–669.