Party Effects Replication Book

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README

This is a complicated project, with a large number of code (18) and data (161) files for different models. Each of the eighteen code files includes, at the beginning, detailed information on the operating system and version of R that we employed. For the purpose of replication, we partition below these files into four different sets:

- Step 1: Positive Trait Item Response Theory model to produce pressure scores
- Step 2: Data preparation leading to estimation of the 1MPE and 2MPE models for Brazil and Mexico
- Step 3: Estimation of 1MPE and 2MPE models in Brazil and Mexico
- Step 4: Production of figures and tables for main article and appendix

Strictly speaking, the production of figures and tables in the appendix requires running only file `18_reportPartyPressure_JOP_final.R` in Step 4. The dataverse includes ready-made versions of all the input files required to run Step 4 in the `all_data` file. Steps 1 through 3 should be run sequentially if the intention is to verify that the necessary input files for Step 4 can be cleanly produced from source files. Running Steps 1 and 2 is time-consuming, but doable within one day. Step 3 is the most time-consuming of all, and it will require extensive use of high-powered computational equipment during an extended period of time.

In executing all 18 files in Steps 1 through 4, we commented out all instructions to save objects into `all_data`. These instructions are typically prefaced by a line that reads "Uncomment next line to save files". Our recommendation is to work with the ready-made versions of all these files, and to avoid saving over them. We also commented out all code necessary to produce pdf versions of the figures in the paper. These lines can be commented in if the purpose is to reproduce the graphs; the default option will produce the plots within `R`. Throughout code files 1 through 18, we include statements of the following sort: `savePathRep <- "~/all_data/"`. Please substitute in for `all_data` the local path where you keep the ready-made files.

Step 1: Positive Trait Item Response Theory model to produce pressure scores

Brazil:

- File 01_run_party_pressure_brazil.R inputs the following original datasets:
  - PT_pressure_analysis.txt
  - PMDB_pressure_analysis.txt
  - PSDB_pressure_analysis.txt
  - DEM_pressure_analysis.txt
  - PP_pressure_analysis.txt
  - PR_pressure_analysis.txt

    Each of the files has 12 items (columns). The coding scheme for each of the 12 items is described in Table 1 of the paper.
- File 01_run_party_pressure_brazil.R outputs the following dataset:
  - brazil_ptirt_mcmc.Rda

Mexico:

- File 02_run_party_pressure_mexico.R inputs the following datasets:
  - PRI_pressure_analysis.txt
  - PAN_pressure_analysis.txt
  - PRD_pressure_analysis.txt

    Each file has 10 items (columns). The coding scheme for each of the 10 items is described in Table 2 of the paper.
- File 02_run_party_pressure_mexico.R outputs the following datasets:
  - mexico_ptirt_mcmc.Rda

Step 2: Data preparation leading to estimation of the 1MPE and 2MPE models for Brazil and Mexico

Brazil

Run the following files, sequentially:

- 03_prepareRollCallBrazil-1.R
- 04_prepareRollCallBrazil-2.R
- 05_prepareRollCallBrazil-3.R

- File 03_prepareRollCallBrazil-1.R inputs the following datasets:

  - brazil_original_rollcall.txt
  - brazil_ptirt_mcmc.Rda
  - brazil_vote_information_leg54.txt
  - brazil_deputy_information_leg54.txt

- File 03_prepareRollCallBrazil-1.R produces the following dataset:
  - prepared_roll_call_data_brazil.Rdata

- Files 04_prepareRollCallBrazil-2.R and 05_prepareRollCallBrazil-3.R input the following datasets:
  - prepared_roll_call_data_brazil.Rdata
  - brazil_present_absent_information.csv
  - brazil_vote_codification.xlsx

- File 04_prepareRollCallBrazil-2.R produces the following datasets:
  - brazil_rollcall_long_format_1.Rdata
  - brazil_rollcall_long_format_2.Rdata
  - brazil_rollcall_long_format_3.Rdata
  - brazil_rollcall_long_format_4.Rdata
  - brazil_rollcall_long_format_5.Rdata
  - brazil_rollcall_long_format_6.Rdata
  - brazil_rollcall_long_format_7.Rdata
  - brazil_rollcall_long_format_8.Rdata
  - brazil_rollcall_long_format_9.Rdata
  - brazil_rollcall_long_format_10.Rdata

- File 05_prepareRollCallBrazil-3.R produces the following dataset:
  - brazil_rollcall_long_format_mean.Rdata

- Run the following file:
  - 06_estimateCJR_model_brazil.R

- File 06_estimateCJR_model_brazil.R inputs the following dataset:
  - brazil_rollcall_long_format_mean.Rdata

- File 06_estimateCJR_model_brazil.R produces the following dataset:
  - brazil_CJR_auxiliary_output.Rda

Mexico

Run the following files, sequentially:

- 07_prepareRollCallMexico-1.R
- 08_prepareRollCallMexico-2.R
- 09_prepareRollCallMexico-3.R
- 10_prepareRollCallMexico-4.R
- 11_prepareRollCallMexico-5.R

- File 07_prepareRollCallMexico-1.R inputs the following datasets:
  - mexico_original_rollcall.txt
  - mexico_rollcall_with_names.txt
  - mexico_id_information_1.txt
  - mexico_id_information_2.txt
  - mexico_party_membership.txt
  - mexico_deputy_information.txt
  - mexico_missing_deputies.txt
  - mexico_district_information.txt
  - mexico_ptirt_mcmc.Rda

- File 07_prepareRollCallMexico-1.R produces the following dataset:
  - prepared_roll_call_data_mexico.Rdata

- File 08_prepareRollCallMexico-2.R inputs the following dataset:
  - prepared_roll_call_data_mexico.Rdata

- File 08_prepareRollCallMexico-2.R produces the following datasets:
  - mexico_rollcall_intermediate_1.Rdata
  - mexico_rollcall_intermediate_2.Rdata
  - mexico_rollcall_intermediate_3.Rdata
  - mexico_rollcall_intermediate_4.Rdata
  - mexico_rollcall_intermediate_5.Rdata
  - mexico_rollcall_intermediate_6.Rdata
  - mexico_rollcall_intermediate_7.Rdata
  - mexico_rollcall_intermediate_8.Rdata
  - mexico_rollcall_intermediate_9.Rdata
  - mexico_rollcall_intermediate_10.Rdata

- File 09_prepareRollCallMexico-3.R inputs the following dataset:

  - prepared_roll_call_data_mexico.Rdata

- File 09_prepareRollCallMexico-3.R produces the following datasets:
  - mexico_rollcall_intermediate_mean.Rdata

- File 10_prepareRollCallMexico-4.R inputs the following datasets:
  - mexico_rollcall_intermediate_1.Rdata
  - mexico_rollcall_intermediate_2.Rdata
  - mexico_rollcall_intermediate_3.Rdata
  - mexico_rollcall_intermediate_4.Rdata
  - mexico_rollcall_intermediate_5.Rdata
  - mexico_rollcall_intermediate_6.Rdata
  - mexico_rollcall_intermediate_7.Rdata
  - mexico_rollcall_intermediate_8.Rdata
  - mexico_rollcall_intermediate_9.Rdata
  - mexico_rollcall_intermediate_10.Rdata

- File 10_prepareRollCallMexico-4.R produces the following datasets:
  - mexico_rollcall_long_format_1.Rdata
  - mexico_rollcall_long_format_2.Rdata
  - mexico_rollcall_long_format_3.Rdata
  - mexico_rollcall_long_format_4.Rdata
  - mexico_rollcall_long_format_5.Rdata
  - mexico_rollcall_long_format_6.Rdata
  - mexico_rollcall_long_format_7.Rdata
  - mexico_rollcall_long_format_8.Rdata
  - mexico_rollcall_long_format_9.Rdata
  - mexico_rollcall_long_format_10.Rdata

- File 11_prepareRollCallMexico-5.R inputs the following dataset:
  - mexico_rollcall_intermediate_mean.Rdata

- File 11_prepareRollCallMexico-5.R produces the following dataset:
  - mexico_rollcall_long_format_mean.Rdata

- Run the following file:
  - 12_estimateCJR_model_mexico.R

- File 12_estimateCJR_model_mexico.R inputs the following datasets:
  - mexico_rollcall_long_format_mean.Rdata
  - mexico_initial_values.Rda

- File 12_estimateCJR_model_mexico.R produces the following dataset:
  - mexico_CJR_auxiliary_output.Rda

Step 3: Estimation of 1MPE and 2MPE models in Brazil and Mexico

These are the models described in the main paper as the single-mechanism (1MPE) and double-mechanism (2MPE) party effects models. They are very time-intensive to estimate; even setting up one of this models in `R`, and compiling with `jags` might take around 10-20 minutes, while waiting for the model to run for a sufficient number of iterations might take days for the 2MPE.

Brazil's 1MPE and 2MPE

Run the following files, sequentially:

- 13_brazil_competing_principals.R
- 14_brazil_pressure.R
- File 13_brazil_competing_principals.R inputs the following datasets:
  - brazil_seeds_2MPE.csv
  - brazil_rollcall_long_format_1.Rdata
  - brazil_rollcall_long_format_2.Rdata
  - brazil_rollcall_long_format_3.Rdata
  - brazil_rollcall_long_format_4.Rdata
  - brazil_rollcall_long_format_5.Rdata
  - brazil_rollcall_long_format_6.Rdata
  - brazil_rollcall_long_format_7.Rdata
  - brazil_rollcall_long_format_8.Rdata
  - brazil_rollcall_long_format_9.Rdata
  - brazil_rollcall_long_format_10.Rdata
  - brazil_initial_values.Rda

- File 13_brazil_competing_principals.R outputs the following dataset:
  - brazil_competing_final_result_sample_1a.Rda
  - brazil_competing_final_result_sample_1b.Rda

  - brazil_competing_final_result_sample_2a.Rda
  - brazil_competing_final_result_sample_2b.Rda
  - brazil_competing_final_result_sample_3a.Rda
  - brazil_competing_final_result_sample_3b.Rda
  - brazil_competing_final_result_sample_4a.Rda
  - brazil_competing_final_result_sample_4b.Rda
  - brazil_competing_final_result_sample_5a.Rda
  - brazil_competing_final_result_sample_5b.Rda
  - brazil_competing_final_result_sample_6a.Rda
  - brazil_competing_final_result_sample_6b.Rda
  - brazil_competing_final_result_sample_7a.Rda
  - brazil_competing_final_result_sample_7b.Rda
  - brazil_competing_final_result_sample_8a.Rda
  - brazil_competing_final_result_sample_8b.Rda
  - brazil_competing_final_result_sample_9a.Rda
  - brazil_competing_final_result_sample_9b.Rda
  - brazil_competing_final_result_sample_10a.Rda
  - brazil_competing_final_result_sample_10b.Rda
  - brazil_competing_final_result_mean_a.Rda
  - brazil_competing_final_result_mean_b.Rda

- File 14_brazil_pressure.R inputs the following datasets:
  - brazil_seeds_1MPE.csv
  - brazil_rollcall_long_format_1.Rdata
  - brazil_rollcall_long_format_2.Rdata
  - brazil_rollcall_long_format_3.Rdata
  - brazil_rollcall_long_format_4.Rdata
  - brazil_rollcall_long_format_5.Rdata
  - brazil_rollcall_long_format_6.Rdata
  - brazil_rollcall_long_format_7.Rdata
  - brazil_rollcall_long_format_8.Rdata
  - brazil_rollcall_long_format_9.Rdata
  - brazil_rollcall_long_format_10.Rdata
  - brazil_initial_values.Rda

- File 14_brazil_pressure.R outputs the following datasets:
  - brazil_pressure_final_result_sample_1a.Rda
  - brazil_pressure_final_result_sample_1b.Rda
  - brazil_pressure_final_result_sample_2a.Rda

  - brazil_pressure_final_result_sample_2b.Rda
  - brazil_pressure_final_result_sample_3a.Rda
  - brazil_pressure_final_result_sample_3b.Rda
  - brazil_pressure_final_result_sample_4a.Rda
  - brazil_pressure_final_result_sample_4b.Rda
  - brazil_pressure_final_result_sample_5a.Rda
  - brazil_pressure_final_result_sample_5b.Rda
  - brazil_pressure_final_result_sample_6a.Rda
  - brazil_pressure_final_result_sample_6b.Rda
  - brazil_pressure_final_result_sample_7a.Rda
  - brazil_pressure_final_result_sample_7b.Rda
  - brazil_pressure_final_result_sample_8a.Rda
  - brazil_pressure_final_result_sample_8b.Rda
  - brazil_pressure_final_result_sample_9a.Rda
  - brazil_pressure_final_result_sample_9b.Rda
  - brazil_pressure_final_result_sample_10a.Rda
  - brazil_pressure_final_result_sample_10b.Rda
  - brazil_pressure_final_result_mean_a.Rda
  - brazil_pressure_final_result_mean_b.Rda

Mexico's 1MPE and 2MPE

Run the following files, sequentially:

- 15_mexico_competing_principals.R
- 16_mexico_pressure.R
- File 15_mexico_competing_principals.R inputs the following datasets:
  - mexico_initial_values.Rda
  - mexico_rollcall_long_format_1.RData
  - mexico_rollcall_long_format_2.RData
  - mexico_rollcall_long_format_3.RData
  - mexico_rollcall_long_format_4.RData
  - mexico_rollcall_long_format_5.RData
  - mexico_rollcall_long_format_6.RData
  - mexico_rollcall_long_format_7.RData
  - mexico_rollcall_long_format_8.RData
  - mexico_rollcall_long_format_9.RData
  - mexico_rollcall_long_format_10.RData
- File 15_mexico_competing_principals.R outputs the following datasets:

  - mexico_competing_final_result_sample_1a.Rda
  - mexico_competing_final_result_sample_1b.Rda
  - mexico_competing_final_result_sample_2a.Rda
  - mexico_competing_final_result_sample_2b.Rda
  - mexico_competing_final_result_sample_3a.Rda
  - mexico_competing_final_result_sample_3b.Rda
  - mexico_competing_final_result_sample_4a.Rda
  - mexico_competing_final_result_sample_4b.Rda
  - mexico_competing_final_result_sample_5a.Rda
  - mexico_competing_final_result_sample_5b.Rda
  - mexico_competing_final_result_sample_6a.Rda
  - mexico_competing_final_result_sample_6b.Rda
  - mexico_competing_final_result_sample_7a.Rda
  - mexico_competing_final_result_sample_7b.Rda
  - mexico_competing_final_result_sample_8a.Rda
  - mexico_competing_final_result_sample_8b.Rda
  - mexico_competing_final_result_sample_9a.Rda
  - mexico_competing_final_result_sample_9b.Rda
  - mexico_competing_final_result_sample_10a.Rda
  - mexico_competing_final_result_sample_10b.Rda
  - mexico_competing_final_result_sample_meana.Rda
  - mexico_competing_final_result_sample_meanb.Rda

- File 16_mexico_pressure.R inputs the following datasets:
  - mexico_initial_values.Rda
  - mexico_rollcall_long_format_1.Rda
  - mexico_rollcall_long_format_2.Rda
  - mexico_rollcall_long_format_3.Rda
  - mexico_rollcall_long_format_4.Rda
  - mexico_rollcall_long_format_5.Rda
  - mexico_rollcall_long_format_6.Rda
  - mexico_rollcall_long_format_7.Rda
  - mexico_rollcall_long_format_8.Rda
  - mexico_rollcall_long_format_9.Rda
  - mexico_rollcall_long_format_10.Rda

- File 16_mexico_pressure.R outputs the following datasets:
  - mexico_pressure_final_result_sample_1a.Rda
  - mexico_pressure_final_result_sample_1b.Rda

  - mexico_pressure_final_result_sample_2a.Rda
  - mexico_pressure_final_result_sample_2b.Rda
  - mexico_pressure_final_result_sample_3a.Rda
  - mexico_pressure_final_result_sample_3b.Rda
  - mexico_pressure_final_result_sample_4a.Rda
  - mexico_pressure_final_result_sample_4b.Rda
  - mexico_pressure_final_result_sample_5a.Rda
  - mexico_pressure_final_result_sample_5b.Rda
  - mexico_pressure_final_result_sample_6a.Rda
  - mexico_pressure_final_result_sample_6b.Rda
  - mexico_pressure_final_result_sample_7a.Rda
  - mexico_pressure_final_result_sample_7b.Rda
  - mexico_pressure_final_result_sample_8a.Rda
  - mexico_pressure_final_result_sample_8b.Rda
  - mexico_pressure_final_result_sample_9a.Rda
  - mexico_pressure_final_result_sample_9b.Rda
  - mexico_pressure_final_result_sample_10a.Rda
  - mexico_pressure_final_result_sample_10b.Rda
  - mexico_pressure_final_result_sample_meana.Rda
  - mexico_pressure_final_result_sample_meanb.Rda

Run the following file:

- 17_combining_chains_all_processes.R

- File 17_combining_chains_all_processes.R inputs the following datasets:
  - brazil_competing_final_result_sample_1a.Rda
  - brazil_competing_final_result_sample_1b.Rda
  - brazil_competing_final_result_sample_2a.Rda
  - brazil_competing_final_result_sample_2b.Rda
  - brazil_competing_final_result_sample_3a.Rda
  - brazil_competing_final_result_sample_3b.Rda
  - brazil_competing_final_result_sample_4a.Rda
  - brazil_competing_final_result_sample_4b.Rda
  - brazil_competing_final_result_sample_5a.Rda
  - brazil_competing_final_result_sample_5b.Rda
  - brazil_competing_final_result_sample_6a.Rda
  - brazil_competing_final_result_sample_6b.Rda
  - brazil_competing_final_result_sample_7a.Rda
  - brazil_competing_final_result_sample_7b.Rda

- brazil_competing_final_result_sample_8a.Rda
- brazil_competing_final_result_sample_8b.Rda
- brazil_competing_final_result_sample_9a.Rda
- brazil_competing_final_result_sample_9b.Rda
- brazil_competing_final_result_sample_10a.Rda
- brazil_competing_final_result_sample_10b.Rda
- brazil_pressure_final_result_sample_1a.Rda
- brazil_pressure_final_result_sample_1b.Rda
- brazil_pressure_final_result_sample_2a.Rda
- brazil_pressure_final_result_sample_2b.Rda
- brazil_pressure_final_result_sample_3a.Rda
- brazil_pressure_final_result_sample_3b.Rda
- brazil_pressure_final_result_sample_4a.Rda
- brazil_pressure_final_result_sample_4b.Rda
- brazil_pressure_final_result_sample_5a.Rda
- brazil_pressure_final_result_sample_5b.Rda
- brazil_pressure_final_result_sample_6a.Rda
- brazil_pressure_final_result_sample_6b.Rda
- brazil_pressure_final_result_sample_7a.Rda
- brazil_pressure_final_result_sample_7b.Rda
- brazil_pressure_final_result_sample_8a.Rda
- brazil_pressure_final_result_sample_8b.Rda
- brazil_pressure_final_result_sample_9a.Rda
- brazil_pressure_final_result_sample_9b.Rda
- brazil_pressure_final_result_sample_10a.Rda
- brazil_pressure_final_result_sample_10b.Rda
- mexico_competing_final_result_sample_1a.Rda
- mexico_competing_final_result_sample_1b.Rda
- mexico_competing_final_result_sample_2a.Rda
- mexico_competing_final_result_sample_2b.Rda
- mexico_competing_final_result_sample_3a.Rda
- mexico_competing_final_result_sample_3b.Rda
- mexico_competing_final_result_sample_4a.Rda
- mexico_competing_final_result_sample_4b.Rda
- mexico_competing_final_result_sample_5a.Rda
- mexico_competing_final_result_sample_5b.Rda
- mexico_competing_final_result_sample_6a.Rda
- mexico_competing_final_result_sample_6b.Rda
- mexico_competing_final_result_sample_7a.Rda
- mexico_competing_final_result_sample_7b.Rda

  - mexico_competing_final_result_sample_8a.Rda
  - mexico_competing_final_result_sample_8b.Rda
  - mexico_competing_final_result_sample_9a.Rda
  - mexico_competing_final_result_sample_9b.Rda
  - mexico_competing_final_result_sample_10a.Rda
  - mexico_competing_final_result_sample_10b.Rda
  - mexico_pressure_final_result_sample_1a.Rda
  - mexico_pressure_final_result_sample_1b.Rda
  - mexico_pressure_final_result_sample_2a.Rda
  - mexico_pressure_final_result_sample_2b.Rda
  - mexico_pressure_final_result_sample_3a.Rda
  - mexico_pressure_final_result_sample_3b.Rda
  - mexico_pressure_final_result_sample_4a.Rda
  - mexico_pressure_final_result_sample_4b.Rda
  - mexico_pressure_final_result_sample_5a.Rda
  - mexico_pressure_final_result_sample_5b.Rda
  - mexico_pressure_final_result_sample_6a.Rda
  - mexico_pressure_final_result_sample_6b.Rda
  - mexico_pressure_final_result_sample_7a.Rda
  - mexico_pressure_final_result_sample_7b.Rda
  - mexico_pressure_final_result_sample_8a.Rda
  - mexico_pressure_final_result_sample_8b.Rda
  - mexico_pressure_final_result_sample_9a.Rda
  - mexico_pressure_final_result_sample_9b.Rda
  - mexico_pressure_final_result_sample_10a.Rda
  - mexico_pressure_final_result_sample_10b.Rda

- File 17_combining_chains_all_processes.R outputs the following datasets:
  - objects_1MPE_Brazil.Rdata
  - objects_2MPE_Brazil.Rdata
  - objects_1MPE_Mexico.Rdata
  - objects_2MPE_Mexico.Rdata

Brazil and Mexico, collecting all chains for use in Step 4

Run the following file:

- 17_combining_chains_all_processes.R

- File 17_combining_chains_all_processes.R inputs the following datasets:
  - brazil_competing_final_result_sample_1a.Rda

- brazil_competing_final_result_sample_1b.Rda
- brazil_competing_final_result_sample_2a.Rda
- brazil_competing_final_result_sample_2b.Rda
- brazil_competing_final_result_sample_3a.Rda
- brazil_competing_final_result_sample_3b.Rda
- brazil_competing_final_result_sample_4a.Rda
- brazil_competing_final_result_sample_4b.Rda
- brazil_competing_final_result_sample_5a.Rda
- brazil_competing_final_result_sample_5b.Rda
- brazil_competing_final_result_sample_6a.Rda
- brazil_competing_final_result_sample_6b.Rda
- brazil_competing_final_result_sample_7a.Rda
- brazil_competing_final_result_sample_7b.Rda
- brazil_competing_final_result_sample_8a.Rda
- brazil_competing_final_result_sample_8b.Rda
- brazil_competing_final_result_sample_9a.Rda
- brazil_competing_final_result_sample_9b.Rda
- brazil_competing_final_result_sample_10a.Rda
- brazil_competing_final_result_sample_10b.Rda
- brazil_pressure_final_result_sample_1a.Rda
- brazil_pressure_final_result_sample_1b.Rda
- brazil_pressure_final_result_sample_2a.Rda
- brazil_pressure_final_result_sample_2b.Rda
- brazil_pressure_final_result_sample_3a.Rda
- brazil_pressure_final_result_sample_3b.Rda
- brazil_pressure_final_result_sample_4a.Rda
- brazil_pressure_final_result_sample_4b.Rda
- brazil_pressure_final_result_sample_5a.Rda
- brazil_pressure_final_result_sample_5b.Rda
- brazil_pressure_final_result_sample_6a.Rda
- brazil_pressure_final_result_sample_6b.Rda
- brazil_pressure_final_result_sample_7a.Rda
- brazil_pressure_final_result_sample_7b.Rda
- brazil_pressure_final_result_sample_8a.Rda
- brazil_pressure_final_result_sample_8b.Rda
- brazil_pressure_final_result_sample_9a.Rda
- brazil_pressure_final_result_sample_9b.Rda
- brazil_pressure_final_result_sample_10a.Rda
- brazil_pressure_final_result_sample_10b.Rda
- mexico_competing_final_result_sample_1a.Rda
- mexico_competing_final_result_sample_1b.Rda
- mexico_competing_final_result_sample_2a.Rda
- mexico_competing_final_result_sample_2b.Rda
- mexico_competing_final_result_sample_3a.Rda
- mexico_competing_final_result_sample_3b.Rda
- mexico_competing_final_result_sample_4a.Rda

  - mexico_competing_final_result_sample_4b.Rda
  - mexico_competing_final_result_sample_5a.Rda
  - mexico_competing_final_result_sample_5b.Rda
  - mexico_competing_final_result_sample_6a.Rda
  - mexico_competing_final_result_sample_6b.Rda
  - mexico_competing_final_result_sample_7a.Rda
  - mexico_competing_final_result_sample_7b.Rda
  - mexico_competing_final_result_sample_8a.Rda
  - mexico_competing_final_result_sample_8b.Rda
  - mexico_competing_final_result_sample_9a.Rda
  - mexico_competing_final_result_sample_9b.Rda
  - mexico_competing_final_result_sample_10a.Rda
  - mexico_competing_final_result_sample_10b.Rda
  - mexico_pressure_final_result_sample_1a.Rda
  - mexico_pressure_final_result_sample_1b.Rda
  - mexico_pressure_final_result_sample_2a.Rda
  - mexico_pressure_final_result_sample_2b.Rda
  - mexico_pressure_final_result_sample_3a.Rda
  - mexico_pressure_final_result_sample_3b.Rda
  - mexico_pressure_final_result_sample_4a.Rda
  - mexico_pressure_final_result_sample_4b.Rda
  - mexico_pressure_final_result_sample_5a.Rda
  - mexico_pressure_final_result_sample_5b.Rda
  - mexico_pressure_final_result_sample_6a.Rda
  - mexico_pressure_final_result_sample_6b.Rda
  - mexico_pressure_final_result_sample_7a.Rda
  - mexico_pressure_final_result_sample_7b.Rda
  - mexico_pressure_final_result_sample_8a.Rda
  - mexico_pressure_final_result_sample_8b.Rda
  - mexico_pressure_final_result_sample_9a.Rda
  - mexico_pressure_final_result_sample_9b.Rda
  - mexico_pressure_final_result_sample_10a.Rda
  - mexico_pressure_final_result_sample_10b.Rda

- File 17_combining_chains_all_processes.R produces the following datasets:
  - objects_1MPE_Brazil.RData
  - objects_2MPE_Brazil.RData
  - objects_1MPE_Mexico.RData
  - objects_2MPE_Mexico.RData

Step 4: Production of figures and tables for main article and appendix

Run the following file:

- 18_reportPartyPressure_JOP_final.R

- File 18_reportPartyPressure_JOP_final.R inputs the following datasets:
  - brazil_ptirt_mcmc.Rda
  - brazil_rollcall_long_format_mean.Rdata
  - mexico_ptirt_mcmc.Rda
  - mexico_leader_decisions.Rda
  - objects_2MPE_Mexico.Rdata
  - objects_1MPE_Mexico.Rdata
  - mexico_pressure_final_result_meana.Rda
  - mexico_pressure_final_result_meanb.Rda
  - mexico_competing_final_result_meana.Rda
  - mexico_competing_final_result_meanb.Rda
  - objects_2MPE_Brazil.Rdata
  - objects_1MPE_Brazil.Rdata
  - brazil_pressure_final_result_mean_a.Rda
  - brazil_pressure_final_result_mean_b.Rda
  - brazil_competing_final_result_sample_mean_a.Rda
  - brazil_competing_final_result_sample_mean_b.Rda
  - brazil_rollcall_long_format_mean.Rdata
  - brazil_CJR_auxiliary_output.Rda
  - mexico_CJR_auxiliary_output.Rda
  - mexico_rollcall_long_format_mean.Rdata
  - prepared_roll_call_data_brazil.Rdata

- File 18_reportPartyPressure_JOP_final.R produces the following figures:
  - pressurePT.pdf
  - pressurePMDB.pdf
  - pressurePSDB.pdf
  - pressureDEM.pdf
  - pressurePP.pdf
  - pressurePR.pdf
  - fig8.pdf
  - fig7.pdf
  - fig9.pdf
  - fig11.pdf
  - fig10.pdf
  - fig12.pdf
  - pressurePRI.pdf
  - pressurePAN.pdf

  - pressurePRD.pdf
  - fig13.pdf
  - fig15.pdf
  - fig16.pdf
  - fig12.pdf
  - fig14.pdf
  - fig3.pdf
  - fig4.pdf
  - fig19.pdf
  - fig17.pdf
  - fig1.pdf
  - fig5.pdf
  - fig20.pdf
  - fig18.pdf
  - fig6.pdf
  - MexicoPartyEllipsesPENVMbNw_Medians.pdf
  - fig2.pdf
  - fig26.pdf
  - fig26.pdf

- File 18_reportPartyPressure_JOP_final.R produces LaTeX code for Tables 4 through 8 in the main paper, as well as for Tables C2, D1, and H1 through H4 in the appendix.