Files in this folder recreate Figures and Tables in Cook, Hays, Franzese: “STADL Up! The Spatio-Temporal Autoregressive Distributed Lag Model for TSCS Data Analysis” (*APSR* 2022)

Initial version: February 2, 2022

Current version: May 14, 2022

Note: The regression coefficient estimates, standard errors, and measures of fit given in Tables 1 and 2 in the published version of this article are incorrect, as are the textual statements that relied on their numerical values, because the observational ordering of the data-frames and spatial weights matrices were not properly matched. Consequently, the strength of spatial dependence was underestimated in all of the regression models that estimated it. Only the “Empirical Reanalyses'” section is affected by these corrections. No substantive points made or conclusions drawn in the article are altered by these corrections; in fact, the results supporting those points and conclusions are generally made quantitatively stronger/greater in magnitude by the corrections. We have updated our Harvard Dataverse and Replication files.

**Section 1 (Introduction):**

Run TSCStop3.R which will generate Figure 1 (Count of articles using TSCS data…)

**Section 4 (Monte Carlo Analysis):**

1. Run tscs\_sims\_APSR\_final.R to
   1. create the simulation data
   2. run the models
   3. store the results
2. Run tscs\_sims\_plots\_final.R
   1. load the required results produced by tscs\_sims\_APSR\_final.R
   2. produce the Figures 5-11 (Main text) and A1-A5 (Appendix)

**Section 5 (Empirical Reanalyses):**

Run replication\_code\_for\_reanalyses.R which will:

* source the make\_ntspmat function from ntspmat.R
* source the ntspreg, ntsperr, and ntspsac functions from stadl\_models.R
* source the st\_effects function from the st\_effects.R
* read in aer\_5year\_APSR\_full.csv and accountability\_data\_regressions.csv
* estimate the models (referencing which results correspond to which table/column) and calculate the effects mentioned in the text (all as corrected in the Corrigendum).

**Appendix:**

1. If you have not already done so run tscs\_sims\_APSR\_final.R and tscs\_sims\_plots\_final.R to create Figures A1-A5
2. Run tscs\_sims\_tables\_final.R to create Table 1 and Table 2
3. Run tscs\_sims\_error\_APSR\_final.R and tscs\_sims\_error\_tables\_final.R to create Table 3 and Table 4
4. Run tscs\_sims\_persistentX\_final.R and tscs\_sims\_persistentX\_plots\_final.R to create Figures A6 and A7
5. Run tscs\_sims\_SpatiallyDominatedX\_final.R and tscs\_sims\_ SpatiallyDominatedX \_plots\_final.R to create Figures A8 and A9

All scripts run on R using the following:

R version 4.1.1 (2021-08-10)

Platform: x86\_64-w64-mingw32/x64 (64-bit)

Running under: Windows 10 x64 (build 19042)

Matrix products: default

locale:

[1] LC\_COLLATE=English\_United States.1252

[2] LC\_CTYPE=English\_United States.1252

[3] LC\_MONETARY=English\_United States.1252

[4] LC\_NUMERIC=C

[5] LC\_TIME=English\_United States.1252

attached base packages:

[1] stats graphics grDevices utils datasets methods base

other attached packages:

[1] DataCombine\_0.2.21 forcats\_0.5.1 stringr\_1.4.0

[4] purrr\_0.3.4 readr\_2.0.1 tidyr\_1.1.3

[7] tibble\_3.1.4 ggplot2\_3.3.5 tidyverse\_1.3.1

[10] lubridate\_1.7.10 stargazer\_5.2.2 spatialreg\_1.2-1

[13] spdep\_1.1-8 sf\_1.0-2 spData\_0.3.10

[16] sp\_1.4-5 Matrix\_1.3-4 dplyr\_1.0.7

[19] cshapes\_2.0

loaded via a namespace (and not attached):

[1] httr\_1.4.2 jsonlite\_1.7.2 splines\_4.1.1

[4] geojsonlint\_0.4.0 modelr\_0.1.8 gtools\_3.9.2

[7] assertthat\_0.2.1 expm\_0.999-6 cellranger\_1.1.0

[10] LearnBayes\_2.15.1 pillar\_1.6.2 backports\_1.2.1

[13] lattice\_0.20-44 glue\_1.4.2 rvest\_1.0.1

[16] colorspace\_2.0-2 pkgconfig\_2.0.3 rmapshaper\_0.4.5

[19] httpcode\_0.3.0 broom\_0.7.9 raster\_3.4-13

[22] haven\_2.4.3 gmodels\_2.18.1 scales\_1.1.1

[25] gdata\_2.18.0 tzdb\_0.1.2 proxy\_0.4-26

[28] generics\_0.1.0 ellipsis\_0.3.2 withr\_2.4.2

[31] cli\_3.0.1 magrittr\_2.0.1 crayon\_1.4.1

[34] readxl\_1.3.1 deldir\_0.2-10 fs\_1.5.0

[37] fansi\_0.5.0 nlme\_3.1-152 MASS\_7.3-54

[40] xml2\_1.3.2 class\_7.3-19 data.table\_1.14.0

[43] tools\_4.1.1 hms\_1.1.0 lifecycle\_1.0.0

[46] V8\_3.4.2 munsell\_0.5.0 reprex\_2.0.1

[49] compiler\_4.1.1 e1071\_1.7-8 rlang\_0.4.11

[52] classInt\_0.4-3 units\_0.7-2 grid\_4.1.1

[55] rstudioapi\_0.13 boot\_1.3-28 gtable\_0.3.0

[58] codetools\_0.2-18 DBI\_1.1.1 jsonvalidate\_1.1.0

[61] curl\_4.3.2 R6\_2.5.1 utf8\_1.2.2

[64] KernSmooth\_2.23-20 stringi\_1.7.4 parallel\_4.1.1

[67] crul\_1.1.0 Rcpp\_1.0.7 vctrs\_0.3.8

[70] dbplyr\_2.1.1 tidyselect\_1.1.1 coda\_0.19-4