"Using Disasters to Estimate the Impact of Uncertainty"
Scott R. Baker, Nicholas Bloom, and Stephen J. Terry

CODE PACKET

IV directory

Contents
- Empirical Tables.do: a do file which produces the panel IV regressions tables (Tables 1-6) in the paper (STATA)
- *.dta: various relevant data files used by Empirical Tables.do (STATA)

Software & System Requirements, Approximate Runtime
- STATA, ~ 1 GB of Memory
- Runtime of approximately one minute when executed on STATA MP/15.1 on 2017 iMac Pro with 2.3 GHz 18-Core Intel Xeon W and 128 GB of memory

Instructions To Run
- In STATA, run "Panel IV Code.do" to reproduce all tables in the text

IV_VAR directory

Contents
- STEP1_ESTIMATION.m: a MATLAB file that performs estimation of the baseline IV-VAR and various robustness checks
- STEP2_GRAPHS.m: a MATLAB file that generates Figures 6 – 7 in the paper
- VARdata.csv: the baseline IV-VAR sample in csv form
- Subdirectories contain MATLAB files called by STEP1_ESTIMATION.m and STEP2_GRAPHS.m.

Software & System Requirements, Approximate Runtime
- MATLAB, ~ 1.5 GB of memory
- Runtime of approximately one minute when executed on MATLAB R2020a on 2017 iMac Pro with 2.3 GHz 18-Core Intel Xeon W and 128 GB of memory

Instructions To Run
- In MATLAB, run "STEP1_ESTIMATION.M" then "STEP2_GRAPHS.M" to reproduce Figures 6 – 7 in the paper

LMN_VAR directory

Contents
- STEP1_STATA_ESTIMATION.do: a STATA file that estimates the baseline disaster events VAR coefficients and various robustness checks
- STEP2_MATLAB_ESTIMATION.m: a MATLAB file that computes admissible response sets for the baseline disaster events VAR and various robustness checks
- STEP3_GRAPHS.m: a MATLAB file that generates figures including Figures 3-5 in the paper
- Dates_and_Data.dta: the disaster events VAR STATA data called by STEP1_STATA_ESTIMATION.do.

- Subdirectories contain MATLAB and STATA files called by STEP1_STATA_ESTIMATION.do, STEP2_MATLAB_ESTIMATION.m, and STEP3_GRAPHS.m.

Software & System Requirements, Approximate Runtime
- STATA, MATLAB, ~ 2 GB of memory
- STATA runtime of approximately 15 seconds, followed by MATLAB runtime of approximately 151 minutes when executed on STATA MP/15.1 and MATLAB R2020a on 2017 iMac Pro with 2.3 GHz 18-Core Intel Xeon W and 128 GB of memory

Instructions To Run
- In STATA, run "STEP1_STATA_ESTIMATION.do" then in MATLAB run "STEP2_MATLAB_ESTIMATION.m" followed by "STEP3_GRAPHS.m" to reproduce Figures 3-5 from the paper

MODEL directory (supplemental information for results outside published paper)

Contents
- VOL_GROWTH_wrapper.f90: the main model code which structurally estimates the parameters of the disaster mappings in the online appendix of the paper (Fortran)
- base_lib.f90: a library of utility functions called by VOL_GROWTH_wrapper.f90 (Fortran)
- FIRST_STAGE.m: a MATLAB file called by VOL_GROWTH_wrapper.f90 which does some processing of simulated model data
- compile_script.sh: a compilation script for the code using the gfortran compiler (shell script)

Software & System Requirements
- Fortran 90 compiler, MATLAB, ~ 20 GB memory
- Fortran + MATLAB runtime varies tremendously by system architecture and environment settings, can take many hours to execute

Instructions To Run
- In a UNIX shell with GCC installed, run the script "compile_script.sh" to compile the Fortran 90 source code and execute the program, modifying the variable "matlabstr" in VOL_GROWTH_wrapper.f90 to reflect your system's MATLAB command line name.

Data Availability Statement

1. Global Financial Data requires a subscription, generally available through many academic institutions. The monetary cost of this subscription depends on the level of access and the contract signed. GFD (2021b) and GFD (2021a)
2. All other economic indicator data from the World Bank, World Economic Outlook, International Monetary Fund Statistics, EIU Intelligence Unit, and the OECD Main Economic Indicators database are freely accessible online or publicly available with a variable monetary cost. WB (2021) IMF (2021b) IMF (2021a) EIU (2021) OECD (2021)
3. Uncertainty indexes including the EPU and WUI indexes are available freely on the referenced websites. EPU (2021) WUI (2021)
4. Micro equity market data uses data from international firm-level security files from WRDS's Global Compustat Capital IQ database. This database can be accessed with a subscription

available at many academic institutions. The monetary cost of this subscription depends on the level of access and the contract signed. WRDS (2021)

5. Center for Research on the Epidemiology of Disasters provides disaster data freely for academic research following the creation of an account. Researchers are freely able to download from the database with some limits on the number of results and queries. CRED (2021)

6. Data from the Center for Systemic Peace regarding terrorist attacks, coups, and revolutions are freely available on their referenced websites. CSP (2021c), CSP (2021a), and CSP (2021b)

Data References

Center for Systemic Peace (2021a). "1970-2021 Coups d'Etat". Center for Research on System Peace. url: http://www.systemicpeace.org/inscr/CSPCoupsListv2021.xls

— (2021b). "1970-2021 PITF State Failure Problem Set". Center for Research on System Peace. url: http://www.systemicpeace.org/inscrdata.html

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— (2021b). "IMF World Economic Outlook 1970-2021 Quarterly Real GDP". International Monetary Fund. url: http://www.imf.org/external/pubs/ft/weo/2009/01/weodata/index.aspx

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