These replicate all tables, figures, and statistics reported in the text of:

"Growth Off the Rails: Aggregate Productivity Growth in Distorted Economies"

Richard Hornbeck and Martin Rotemberg (2023)

In order to run these files, a user needs to open "master_do_file.do" and change line 12 to the directory of choice. Running all of the files from start to finish in their entirety can take 10 days for a computer with 15 GB of RAM and sufficient processing power. However, to run the code without estimating the model parameters and the counterfactual scenarios, line 9 can be set to 0. This bypasses all of the Matlab model estimations and simply uses the already existing output. If in replication, one wants to skip calibrating the model parameters (this takes about half the computation time), you can change line 55 so that "calc_theta_full" is equal to 0. This will then skip calibrating θ and $\bar{P}$, but it will still generate counterfactual distributions of prices and labor. All files used as inputs to this replication code are included in "generate_prestructural/input". All other files are created from those inputs.

There are four subfolders, each of which needs to be unzipped into the same folder in order to the master_do_file to run.

* Order of File Structure *

(1) generate_prestructural - prepares all files for calibrating the model parameters (theta, Pbar)

(2) structural - estimates θ and $\bar{P}$, and counterfactual scenarios

(3) generate_poststructural - brings together all files for producing tables

(4) reduced_form - Creates figures, tables, and statistics for the text

* Connecting Tables to Final Tables *

All tables are put into a few files:

(1) reduced_form/alltables.xlsx - All tables and text statistics

(2) structural/counterfactuals_theta1.95.xlsx - Lower bound of theta CI counterfactual

(3) structural/counterfactuals_theta3.05.xlsx - All counterfactuals

(4) structural/counterfactuals_theta3.9.xlsx - Upper bound of theta CI counterfactual

(5) structural/counterfactuals_theta8.22.xlsx - Previous theta estimate for agriculture (Donaldson and Hornbeck 2016)

* Notes on Input Files: *

Ag_Census_1860

- ICPSR files from Haines, Fishback, and Rhode

Civil War Battles

- The final dataset is nps_battle_data_clean.dta, scraped from:
  https://www.nps.gov/abpp/battles/bystate.htm using cw_scrape.py
  This includes all battlefields identified as significant by the Civil War Sites
  Advisory Commission's Report on the Nation's Civil War Battlefields of 1993.
  The data are cleaned by "prepare_nps_battle_data.do". Detailed variable
  documentation is available at https://www.nps.gov/abpp/battles/tvii.htm

County Industry Files

- This folder contains crosswalks and digitizations of the county-by-industry tabulations
  with details on the process contained in a ReadMe within this folder. Original PDFs
  are contained in the subfolders.

Employment Data

- Craig-Weiss Rural Agricultural Employment Data
- Available here: https://eh.net/database/u-s-agricultural-workforce1800-1900/

CPI

- Federal Reserve Bank of Minneapolis, 1967=100

GIS and Borderfix Files

- See "borderfix/readme_BorderFix_new.rtf" for updated border fix procedure
- Shapefiles downloaded from NHGIS: https://www.nhgis.org/documentation/gis-data

Banking Data

- BanksByCounty -1850 -1900 - ByType.dta from Matthew Jaremski
- 18*0_balance_sheet.dta - From Chenzi Xu

ipums1870

- We calculated measures of county wealth using the complete count 1870 Census from IPUMS. We did not include that data (which is available by request), and only included the processed wealth data. We also included the code to read in the raw IPUMS data, which is commented out of the main codestream.