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Documentation for Replication Packet for “Trapped Factors and China's Impact on Global Growth”
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If you have any questions about the data files or the code, please contact Stephen Terry at sterry@stanford.edu.

DATA

(US_PER_CAPITA_GDP_GROWTH)

USARGDPC.xls – Excel file from St. Louis Fred database, current as of September 2011, containing US Real GDP per capita at annual frequency from 1960-2010. Calculation of average percentage growth rate is performed in the spreadsheet.

(IMPORT_RATIOS)

china_imports.xls – Excel file with data from OECD-STAN database of total imports into OECD countries from China, covering 1990-2010. Current as of April 2013.

OECD_GROSS_OUTPUT_COMPILED.xls – Excel file with compiled data from OECD-STAN database of total imports from non-OECD countries into OECD countries, 1997-2006. Current as of March 2013. This series is imputed within the spreadsheet by first aggregating imports into a given OECD country from all OECD partners, then subtracting this from world imports into that country. Used to create “non_oecd_imports.csv” for processing.

iso_codes.csv – File containing two- and three-digit ISO country codes and names from Feie Universitat Berlin department of Chemistry and Biochemistry website, available at http://userpage.chemie.fu-berlin.de/diverse/doc/ISO_3166.html. The file also includes manually appended data on whether a country is an OECD member, and if so in which year they acceded to OECD membership, as determined by the OECD membership list at the following website: <http://www.oecd.org/general/listofocdmembercountries-ratificationoftheconventionontheoecd.htm>.

pwt71_data.csv – CSV file containing data from Version 7.1 of the Penn World tables, available at the following website: <https://pwt.sas.upenn.edu/>. Current as of December 2012.

PWT_PROCESS.R – File written in R to combine the information in the above data files to produce non-OECD and Chinese imports to OECD GDP ratios. Also outputs various other series and figures.

(PATENTS)

country_codes.csv – CSV file with country codes used in the NBER patent database. Adapted from iso_codes.csv file documented above, contains country code and OECD membership information.

patassg.dta – Stata file containing patent assignee information from the NBER patent database, downloaded from NBER patent data website as in April 2013: <https://sites.google.com/site/patentdataproject/Home/downloads>. This file contains information on patents assignees which can be used to assign citizenship to a patent. This file must be downloaded by the user due to size.

patsic06_mar09_ipc.dta – Stata file containing patent data from the NBER patent database, current as of April 2013. This file contains records on individual patents, which is used to create patent counts. This file must be downloaded by the user due to size.

patents.R – File written in R to process patent data and produce both mean statistics as well as a graph of patent ratios from foreign countries. This file must be downloaded by the user due to size.

(OECD_GDP_POP_GROWTH)

COMPILED_OECD_TOTALS.xls – Excel file with data from the OECD Stat's National Accounts and Population databases, including real gdp per capita for the OECD as well as population. Growth rates for per capita GDP and population, as well as the means used in calibration of the semiendogenous model, are computed within the spreadsheet. The data was downloaded on May 2, 2013.

(HUMAN_CAPITAL)

BARRO_LEE_DATA.xls – Excel file with educational attainment data from the Barro-Lee Educational Attainment Dataset, downloaded from www.barrolee.com in 2012. Citation for the data is “Barro, Robert and Jong-Wha Lee, “A New Data Set of Educational Attainment in the World, 1950-2010,” NBER Working Paper 15902.

“schoellman_returns_and_calcs.xls” - Spreadsheet combining returns to schooling information from Schoellman (2011), as well as educational attainment and population information from the Barro and Lee data, to compute the non-OECD to OECD human capital ratio. The calibration procedure is described in more detail in Online Appendix B.

MODEL

(BASELINE_TRANSITION)

fm_transition.R – File written in R to compute the baseline fully mobile transition path. Calibration and parametrization can be controlled at the top of the file. Produces graphout_fm.rda, an input into graphs.R, as well as various other files.

tf_transition.R - File written in R to compute the baseline trapped factors transition path. Calibration and parametrization can be controlled at the top of the file. Produces graphout_tf.rda, an input into graphs.R, as well as various other files.

graphs.R – File written in R to produces figures for fully mobile and trapped factors transitions, as well as compute welfare gains from trade liberalization. Requires graphout_tf.rda and graphout_fm.rda as inputs, produces various pdf figures and text files as output.

(CHINA_IMPACT)

fm_china.R – File written in R to compute the fully mobile transition path in the counterfactual with no Chinese import growth. Calibration can be controlled at the top of the model, which is used to produce the “Half China” counterfactual in the paper. This file requires “outdata_total_imports.csv” as an input, which is a relabeled version of “outdata.csv” produced from the file “fm_transition.R” above. Produces

“graphout_fm.rda” and various other files.

tf_china.R - File written in R to compute the trapped factors transition path in the counterfactual with no Chinese import growth. Calibration can be controlled at the top of the model, which is used to produce the “Half China” counterfactual in the paper. This file requires “outdata_total_imports.csv” as an input, which is a relabeled version of “outdata.csv” produced from the file “tf_transition.R” above. Produces “graphout_tf.rda” and various other files.

graphs_compare.R – File written in R to produce the graphs comparing baseline and counterfactual transition paths in the fully mobile and trapped factors economies, given various assumptions about Chinese import growth over the calibration period. Also performs welfare calculations. Requires “graphout_tf_total.rda” and “graphout_fm_total.rda,” which are relabeled versions of “graphout_tf.rda” and “graphout_fm.rda” from the baseline files “tf_transition.R” and “fm_transition.R” from above.

(SEMIENDOGENOUS)

semiendog.R – File written in R to produce the fully mobile transition path in response to a trade liberalization in the semiendogenous version of the growth model. Produces both a summary text file, “summary.txt,” and various figures summarizing the semiendogenous transition. The calibration is controlled from the top of the file.