

This readme file describes the files needed to replicate the results in “The Global Diffusion of Ideas.” The codes listed below were run in MATLAB R2017a, 64-bit (maci64) and Stata/MP 15.0 for Mac (64-bit Intel) Revision 20 Jul 2017 using a MacBook Pro with macOS Mojave.

figure_1_03.m: creates Figure 1 in the paper and Figure OA.14 in the online supplementary appendix.

figures_transition_k0_al0_text_s_04.m: creates figures 2-6 in Section 4 of the paper.

To create the figures in the main text this file uses Matlab data file trans_k0_al0_s_02_mu_34_exp_03.mat. This Matlab data file is created by the Matlab code explore_alpha_t_kappa_0_s_3.m. This code requires the following specialized functions: eq_Z_pi.m, wage_T.m, price.m, and share_w. In addition, it uses the data in the following txt files: trade_small_3.txt, pwt_small_3.txt, and deflator.txt.

adjust_sample_2.m: create the Matlab data files trade_small_3.txt and pwt_small_3.txt. It uses as inputs the data in the following txt files: trade3.txt and pwt4.txt.

prepdata03.do: creates trade3.txt using the raw bilateral trade data in wtf_bilat.dta, a correction for the Indian data in comtrade_India_1998_2000.xlsx, and a few auxiliary files that are included in the replication directory.

pwt80.xlsx: contains the raw data from the Penn World Tables 8.0. The data in pwt4.txt corresponds to the data in sheet ‘final dataset’. The rest of the sheets are used to do intermediate calculations.

figures_transition_k0_al0_text_s_04.m also creates figures OA.2, OA.6, and OA.13 in the online supplementary appendix. To create Figure OA.2 it uses the Matlab data file trans_k0_al0_s_02_non_tradables_3_2_2017.mat, which is itself created by the Matlab code explore_alpha_t_kappa_0_s_non_tradables.m.

explore_alpha_kappa_beta_s_RandD.m: run the simulations and create Figure OA.1 in the online appendix. This code uses the data in the following txt files: trade_small_RandD_2.txt, pwt_small_RandD_2.txt, deflator.txt, RandD0.txt, and RandDT.txt. The first two files are created by adjust_sample_RandD.m, which is a version of adjust_sample_2.m with a different sample selection to reflect the subset of countries with R&D data. The R&D data, RandD0.txt and RandDT.txt, is given in the excel file Innovation_and_Development_Database.xls.

figures_transition_k0_al0_text_p_02: creates figures OA.3 and OA.4 in the online supplementary appendix.

figures_transition_k0_al0_s_phi.m: creates Figure OA.5 in the online supplementary appendix.

calibration_ppp_minimalistic_01.m: creates Figure OA.7 in the online supplementary appendix.

figures_stst_common_k_al_text_s.m: creates figures OA.8, OA.9, and OA.11 in the online supplementary appendix.

explore_data_simple_transition_03.m: creates figure OA.12 in the online supplementary appendix

explore_data_simple_cross_section_02.m: creates figure OA.10 in the online supplementary appendix

figure_OA_15.m: creates Figure OA.15 in the online supplementary appendix. This file uses the Matlab data file data_trans_cal.mat created by figure_OA_15_input.m.

figure_core_peri_triangular.m: creates Figure OA.16 in the online supplementary appendix.

figures_i_in_j_02.m: creates Figure OA.17 in the online supplementary appendix. This files uses the Matlab data files TFP_i_Belgium_bt_060.mat and TFP_i_Switzerland_bt_060.mat created by explore_i_in_j_02.m

exploring_kappa_alpha_miracles.m: creates figures OA.18 and OA.19 in the online supplementary appendix.

tfp_tbl.txt: contains the data in Table 1 in the online appendix. The countries are sorted based on the TFP growth over the sample period. The data in first column of this data file is the order of the countries as they appear in our input data files, and the second through fifth columns correspond to the data in Table 1 of the online appendix. The ISO 3166-1 alpha-3 country codes are in the Matlab data file names.mat. The Matlab file tfp_tbl.txt is created when running explore_alpha_t_kappa_0_s_3.m.