Documentation for replication files for Nicholas Bloom, Paul M. Romer, Stephen J. Terry and John Van Reenen (2013) "A Trapped-Factors Model of Innovation."

BARRO_LEE_DATA.xls = human capital source data, from Barro, Robert and Jong-Wha Lee (2010) "A New Data Set of Educational Attainment in the World, 1950-2010," NBER Working Paper No. 15902. This data can be used, together with the Mincerian human capital accounting approach described in the long version of the paper Bloom, Nicholas, Paul M. Romer, Stephen J. Terry and John Van Reenen (2012), "A Trapped Factors Model of Innovation," to produce human capital stock estimates in the US and non-OECD countries in the year 2000.

TRADE_DATA.xls = data downloaded from the OECD-STAN database containing estimates of US gross output and nominal imports from non-OECD countries into the US. Used to compute the non-OECD/US imports to gross output ratio for model calibration.

fm_transition.R = given the parameter calibrations at top, this file first calibrates the trade openness parameters to match input US imports to gross output ratios, computes the steady-state allocations at pre-shock and post-shock trade policies, and finally computes the full transition path between pre- and post-shock steady-states in the fully mobile environment. This file will have the main output graphout_fm.rda, to be used as input to graph.R. This is a file written in R.

tf_transition.R = given the parameter calibrations at top, this file first calibrates the trade openness parameters to match input US imports to gross output ratios, computes the steady-state allocations at pre-shock and post-shock trade policies, and finally computes the full transition path between pre- and post-shock steady-states in the trapped-factors environment. This file will have the main output graphout_tf.rda, to be used as input to graph.R. This is a file written in R.

graph.R = given graphout_fm.rda and graphout_tf.rda, this file produces all graphs, as well as "welfare.txt," which is a summary of the numerical results used in the paper. This is a file written in R.