README-file accompanying data and code to reproduce the results in *Where is the Value Added: Trade Liberalization and Production Networks*

This repository contains all program codes needed to replicate the results based on publicly available data listed below and display all tables and figures in a PDF file. The repository also contains processed data that enables the reader to run the files `estimation.do` and `counterfactuals.m` followed by `cf_results.m` to replicate, respectively, the estimation and simulation without further ado. `TablesFigures.tex` generates PDF with all tables and figures.

1 Description of data sources underlying the estimation and simulation datasets

1.1 Publicly available data

- *OECD Inter-Country Input-Output (ICIO) Tables, 2016 edition*: downloadable files from *http://www.oecd.org/sti/ind/inter-country-input-output-tables.htm*:
  `ICIO2016_1996.csv,...,ICIO2016_2011.csv`
  - used by `VAdecompositionINPUT.do`
- Jeffrey Bergstrands *Database on Economic Integration Agreements (September 2015)*: downloadable file from *https://www3.nd.edu/ jbergstr/*
  `EIA Database September 30 2015.dta`
  - used by `dataset_estimation.do`
- *OECD ITIC data* downloadable file from *https://stats.oecd.org/Index.aspx?DataSetCode=CIF_FOB_ITIC*:
  `CIF_FOB_ITIC-en.csv`
  - used by `dataset_tariffs.do`
- *WITS tariffs*: files downloaded through institutional access from *https://wits.worldbank.org/WITS/WITS/Restricted/Login.aspx*
  `ave1988mfneat.txt,...,ave2013mfneat.txt;ave1988mfnapp.txt,...,ave2013mfnapp.txt`

– used by `dataset_tariffs.do`

- *COMTRADE trade flows*: files downloaded through institutional access from *https://comtrade.un.org/db/dqQuickQuery.aspx*
  `ComtradeBatch_hs92_1988_all_to_all_import_export.csv` for years 1988-1991,2010-2013; `ComtradeBatch_hs92_1988_all_to_all_import.csv` for years 1992-2009
  `hs07_all_to_all_imports.dta`

  – used by `dataset_tariffs.do`

  `UNcomtrade_SITC3_4digit_2000_CHNUSA_WLD.csv`, `UNcomtrade_SITC3_5digit_2000_CHNUSA_WLD.csv` (China's and U.S. total imports), `UNcomtrade_SITC3_4digit_2000.csv`, `UNcomtrade_SITC3_5digit_2000_part1.csv`, `UNcomtrade_SITC3_5digit_2000_part2.csv` (all countries' imports)

  – used by `dataset_BWelasticities.do`

- Broda & Weinstein (2006) elasticities. Downloadable files from *http://www.columbia.edu/ dew35/TradeElasticities/TradeElasticities.html*: `ElasticitiesBrodaWeinstein90-01_SITCRev3_5-digit.xls`

  – used by `dataset_BWelasticities.do`

1.2 Help files provided in folder RawData

- `USpl.dta`, `uspcl.dta` US GDP price level from *World Development Indicators*
- `helpCHN.dta` help file to split China into subsectors
- `thetasCP_HB.dta` estimated sectoral dispersion parameters from Caliendo and Parro (2015) with sectors adjusted as in Costinot and Rodríguez-Clare (2014)
- `countrylist.dta` correspondence table between numerical (self-generated) country code and iso 3 alphanumeric country code
- `CountryCodes.dta` convert iso-3-numeric to iso-3-alphanumeric country codes.
- Product code conversion tables: `UNconversion_h3_h0.dta` (source: UN TRADE STATISTICS), `concordance_sitc3isic3_1_1.dta` (source: EU RAMON), `hs2toISICr3.dta`, `hs'x'tohs92.dta` for x = 96,02,07,12 (source: WITS)
- `distCHN.dta` distance from China based on CEPII gravity dataset

- `list_eu'x'.dta` for x=1989,1995,2004,2007 help file for splitting EU into member countries
- `8813.dta, 9909.dta` help files to generate balanced panels
- `isolist_icio.dta` list of countries in the ICIO database

2 Description of program codes

2.1 Data Generation

- `dataset_tariffs.do` generates bilateral tariffs for the estimation and simulation from raw data. It also generates a transportation costs dataset used in the simulation.
- `dataset_BWelasticities.do` aggregates the elasticities from Broda and Weinstein (2006) to our sector level

2.2 Simulation

- `dataset_baseline.do` prepares a dataset `io_data_2000.dta` containing all baseline variables that enter the simulation from the ICIO tables in raw format and the tariff dataset prepared in `dataset_tariffs.do`.
- `simulationINPUT.do` prepares the baseline data and data for the counterfactual scenarios for MATLAB
- `initial_conditions_2000.m` reads the baseline data into MATLAB
- `counterfactuals.m` conducts all simulations in MATLAB
  - draws on `Dinprime.m`[1], `equilibrium_LC_i.m`[1], `equilibrium_MF_OC.m`[1], `equilibrium_MF.m`[1], `expenditure_i.m`[1], `expenditure_MF.m`[1]
- `cf_results.m` processes the MATLAB results
  - draws on `scenariolist.m`
- `simulationOUTPUT` loads and processes the MATLAB results in STATA

[1]These files are modified version of code used in Caliendo and Parro (2015), which the authors kindly provided to us.

2.3 Estimation

- `dataset_estimation.do` produces the estimation dataset `regdatats.dta`
- `estimation.do` performs regressions based on `regdatats.dta`

2.4 Descriptives & Results

2.4.1 Descriptives

- `VAdecompositionINPUT.do` processes the ICIO input output data from the raw download-format to input for MATLAB
- `decomposition.m` decomposes total and bilateral trade flows into value added components and computes bilateral value added exports using MATLAB.
- `networks.m` computes the production network measures for both the descriptive and the counterfactual analysis.
- `VAdecompositionOUTPUT.do` processes the MATLAB output and produces figures and output for tables 1 and 2 generated by the files described in the next section.

2.4.2 Results

- `SimulationRESULTS.do` produces tables summarizing the counterfactual analyses.
- `networks.do` produces figures and tables of the descriptive and counterfactual production network analysis.

3 List of tables and figures in the paper and appendices and corresponding program files

- Tables 1-5: `SimulationRESULTS.do`
- Table A1: `VAdecompositionOUTPUT.do`
- Tables A2,A3: `simulationRESULTS.do`
- Table A4: `estimation.do`
- Table F1: `networks.do`
- Tables G1,G2: `estimation.do`
- Figure 1: `VAdecompositionOUTPUT.do`
- Figures 2-4, F1-F4: `networks.do`

References

Broda, C., Weinstein, D., 2006. Globalization and the Gains from Variety. Quarterly Journal of Economics 121 (2), 541–585.

Caliendo, L., Parro, F., 2015. Estimates of the Trade and Welfare Effects of NAFTA. Review of Economic Studies 82 (1), 1–44.

Costinot, A., Rodríguez-Clare, A., 2014. Trade Theory with Numbers: Quantifying the Consequences of Globalization. In: Gopinath, G., Helpman, E., Rogoff, K. (Eds.), Handbook of International Economics. Vol. 4. Elsevier, Ch. 4, pp. 197–261.