

# Replication package for the paper Trade Effects of Industrial Policies : Are Preferential Agreements A Shield?

04/30/2024

## Overview

The code included in this replication package constructs the analysis file using the data sources from Barattieri, Mattoo & Taglioni (2024). There are four main files that execute all the necessary code, including: 1) data manipulation, 2) generation of seven figures, and 3) running regressions presented in the paper. The replicator should anticipate the code to run for approximately 15 hours.

## Statement about Rights

- The authors of the manuscript have legitimate access to and permission to use the data used in this manuscript.
- The codes produced by the authors of the manuscript are licensed under a Modified BSD3 license. See LICENSE.txt for details.

## Details on each Data Source

Data.Name	Data.Files	Location	Provided
"Global Trade Alert"	GTA-OCT-23.csv	1_Data\Raw_data	TRUE
"BACI trade flows by year"	BACI_HS12_Y2012_V202401.csv; BACI_HS12_Y2013_V202401.csv; BACI_HS12_Y2014_V202401.csv; BACI_HS12_Y2015_V202401.csv; BACI_HS12_Y2016_V202401.csv; BACI_HS12_Y2017_V202401.csv; BACI_HS12_Y2018_V202401.csv; BACI_HS12_Y2019_V202401.csv; BACI_HS12_Y2020_V202401.csv; BACI_HS12_Y2021_V202401.csv; BACI_HS12_Y2022_V202401.csv;	1_Data\Raw_data	TRUE
"Deep Trade Agreements"	DTA 2.0 - Vertical Content (v2)	1_Data\Raw_data	TRUE
"GTA NIPO"	GTA_NIPO.xls	1_Data\Raw_data	TRUE
"Census imports"	Standard Report - Imports	1_Data\Raw_data	TRUE

Data.Name	Data.Files	Location	Provided
“ISO codes BACI database”	BACI_ISO_Codes	1_Data\Auxiliary	TRUE
“WB income classification 2007”	Classification-economies-07	1_Data\Auxiliary	TRUE
“WB income classification 2021”	Classification-economies-21	1_Data\Auxiliary	TRUE
“Crosswalk HS codes and ISIC categories”	HS2012_ISIC3	1_Data\Auxiliary	TRUE
“GDP in 2021”	GDP-21	1_Data\Auxiliary	TRUE

## Data Availability and Provenance Statements

### Main datasets

- Data from the Global Trade Alert (Global Trade Alert, 2023) is used in this paper. The full dataset and documentation can be downloaded from [https://www.globaltradealert.org/data\\_extraction](https://www.globaltradealert.org/data_extraction). A copy of the data is provided as part of this archive. The data are in the public domain. The bulk download was performed in R and then saved in excel (GTA-OCT-23.csv). The Database was accessed in November 2023 and reflects information up to October 2023, even if in the project data is used only up to 2022. Data were accessed in January 2024.
- Data from BACI: the International Trade Database at the product level are used in this paper. The full dataset and documentation can be downloaded from [http://www.cepii.fr/CEPII/en/bdd\\_modele/bdd\\_modele\\_item.asp?id=37](http://www.cepii.fr/CEPII/en/bdd_modele/bdd_modele_item.asp?id=37). A copy of the data is provided as part of this archive. The data are in the public domain. In order to download the data, one needs to click download and then select “HS-12 (2012-2022)”, which is a zipped folder with all the csv files in it. Data were accessed in January 2024.
- Measures of preferential Trade Agreements Data from the Deep Trade Agreements database 2.0 (vertical depth) are used in this paper. The full dataset and documentation can be downloaded from <https://datatopics.worldbank.org/dta/table.html>. A copy of the data is provided as part of this archive. The data are in the public domain. Data were accessed in March 2024.
- Data from the New Industrial Policy Observatory compiled as part of the Global Trade Alert are used in this paper. The full dataset and documentation can be downloaded from <https://www.globaltradealert.org/reports/112>. A copy of the data is provided as part of this archive. The data are in the public domain. Data were accessed in February 2024.

- Data from imports are from Census (2024). The full dataset and documentation can be downloaded from <https://usatrade.census.gov/>. A copy of the data is provided as part of this archive. The data are in the public domain. The query that was run selected all imports by NAICS, and then selected all imports to all districts in the period 2017m1 to 2024m2 for the following origin countries: World total, China, ASEAN, Canada, Mexico, and USMCA. Data were accessed in April 2024.

### Auxiliary datasets

- Data from BACI that associates the ISO 3-digit country codes to country names complements the main data BACI base International Trade Database at the product level. It can be downloaded from [http://www.cepii.fr/CEPII/en/bdd\\_modele/bdd\\_modele\\_item.asp?id=37](http://www.cepii.fr/CEPII/en/bdd_modele/bdd_modele_item.asp?id=37). Downloading the compressed file for HS12 includes a file named "country\_codes\_V202401b.csv". We manually kept only the columns "country\_code" and "country\_iso3", created a copy of both for easier data processing later on ("country\_code" was copied into the columns "j" and "i", and "country\_iso3" was copied into "IMP" and "EXP"), and saved the result into Stata. A copy of the resulting data is provided as part of this archive in the file "BACI\_ISO\_Codes.dta". The data are in the public domain. Data were accessed in January 2024.
- We use the World Bank Country and Lending groups classification in 2021 and 2007. The historical classification can be downloaded from <https://datacatalogfiles.worldbank.org/ddh-published/0037712/DR0090754/OGHIST.xlsx>. Data was downloaded from the data URL and the income classification values of the tab "Country Analytical History" for 2007 and 2021 were manually copied into Stata and saved in the files "WB income classification 2007.dta" and "WB income classification 2021.dta". A copy of the data is provided as part of this archive. The data are in the public domain. Data were accessed in January 2024.
- We use a correspondence table between HS 2012 and ISIC. The data can be downloaded from [https://wits.worldbank.org/product\\_concordance.html](https://wits.worldbank.org/product_concordance.html). Data was downloaded from the link "H4 to ISIC Rev 3" of the panel "HS 2012 or H4" of the data URL. Data was manually copied into Stata keeping only the columns "HS 2012 Product Code" (renamed to "HS2012") and "ISIC Revision 3 Product Code" (renamed to "ISIC3\_2") and saved in the file "HS2012\_ISIC3.dta". A copy of the data is provided as part of this archive. The data are in the public domain. Data were accessed in January 2024.
- We use GDP per capita (PPP constant 2017 international \$) data for 2021 from the World Bank's development indicators. The data can be downloaded from <https://data.worldbank.org/indicator/NY.GDP.PCAP.PP.KD>. Data was downloaded from the data URL and manually copied into Stata keeping only the columns "Country code" (renamed to "Economy") and 2021 (renamed to "gdp\_pc"). A column with the logarithm of "gdp\_pc" was then

created with the name "ln\_gdp\_pc". The resulting data was saved in the file "GDP-21.dta". A copy of the data is provided as part of this archive. The data are in the public domain. Data were accessed in January 2024. Since then, there was a change in base year from 2017 to 2021.

## Computational requirements

### Software Requirements –(Versions as of 2024-04-25)

- Stata (code was last run with version 16). All dependency files are included in the reproducibility package:
  - reghdfe
  - estout
  - unique
- R (code was last run with version 4.3). A metadata file generated with the package “renv” contains the version of the dependencies used:
  - tidyr
  - reshape2
  - haven
  - stringr
  - dplyr
- The code was last run on a Windows 10 laptop with 16GB of RAM and i5-1145G7 processor.

### Instructions to Replicators

1. Open the do-file "0-master.do" and edit line 20 to adjust the default root
2. Run the do-file
3. Run the R script "3-Split Sectors-Products.R"

#### Optional instructions for running the R code in a renv programming environment:

Replicators who wish to reproduce the R programming environment where the results were produced should follow these instructions instead of point 3.

1. Open the RStudio project file "RR\_EAP\_2024\_161.Rproj" in RStudio
2. When prompted to install the dependencies, reply "Yes".
3. In the same RStudio session, open "3-Split Sectors-Products.R" and run it.

Replicators using Windows might need to have RTools installed for step 2. You can install it [here](#).

## List of tables and figures

Table #	Program	Title
Table 1	n.a. (no data)	2 Examples from the Global Trade Alert
Table 2	n.a. (no data)	Question on subsidies in the Deep Trade Agreement Database
Table 3	2_Do_files/5-Regressions	Baseline results
Table 4	2_Do_files/5-Regressions	Robustness: a more demanding specification
Table 5	2_Do_files/5-Regressions	Robustness: excluding potential outliers (Trade Growth > 200% or <-200%)
Table 6	2_Do_files/5-Regressions	Robustness: Regressions on (log) Levels of Trade
Table 7	2_Do_files/5-Regressions	Heterogeneity across regions
Table 8	2_Do_files/5-Regressions	Heterogeneity across sectors

  

Figure #	Program	Title
Figure 1	2_Do_files/6-Figures	New Ind policies and GDP per capita
Figure 2	2_Do_files/6-Figures	Exports to the US, selected markets
Figure 3	n.a. (figure made by authors from coefficients shown in table 3)	Baseline results Instructions for reproducing the figure: <ul style="list-style-type: none"> <li>- Average effect: column m1 in table 3</li> <li>- Non-member of PTA: coefficient for IP from the column m2 in table 3</li> <li>- Member of PTA: sum of the coefficients for IP and IP_PTA from the column m2 in table 3. Estimated in line 26 of the do-file "5-regressions.do"</li> <li>- Member of deep PTA: sum of the coefficients for IP and IP_PTA_Depth, in column m5 of table 3, assuming a value of PTA_Depth of 0.5 (corresponding to the</li> </ul>

95<sup>th</sup> percentile of the distribution). This is estimated in line 36 of "05-regressions.do"

Figure 4	n.a. (figure taken from the GTA handbook)	GTA chapters
Figure 5	2_Do_files/6-Figures	Number of new restrictions 2009-2023
Figure 6	2_Do_files/6-Figures	Breakdown in industrial policies, import and export restrictions
Figure 7	2_Do_files/6-Figures	Restrictive and liberalizing measures, by trade policy instrument

## References

- Census (2024) USA trade online, available at <https://usatrade.census.gov/>
- Evenett, S. J., & Fritz, J. (2020). The Global Trade Alert database handbook. Manuscript, 26 October 2022.
- Evenett, S., Jakubik, A., Martín, F., & Ruta, M. (2024). The Return of Industrial Policy in Data. IMF Working Paper WP/24/1.
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