README for "Brexit Uncertainty and its (Dis)Service Effects"
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The codes and datasets in this replication package use STATA to generate the results found in the main text and the online appendix of the paper.

Data Availability Statement

The following data sets are cited in the paper and presented here with the relevant links to download.

i. Quarterly values of UK imports and exports by service type from the UK's Office for National Statistics. The data is provided under the UK's Open Government License and is publicly available. https://www.ons.gov.uk/businessindustryandtrade/internationaltrade/datasets/uktradeinservicesservicetypebypartnercountrynonseasonallyadjusted

ii. Services trade restrictiveness obtained from the OECD's Services Trade Restrictiveness Index for Year: 2016 and Classification: Restrictions on foreign entry. The OECD makes their data available for use and consultation by the public. https://stats.oecd.org/Index.aspx?DataSetCode=STRI

For constructing the services trade restrictions index, some additional steps were performed. These included examining specific measures and consulting the original documentation for the share of discriminatory measures by each sector using https://www.oecd.org/trade/topics/services-trade/ To construct the share of discriminatory measures (Table A2), download all papers labeled "Sector papers," and find the "Classification of trade barriers" annex in each paper. From there, tabulate the share of measures labelled "D" in the last column of the annex tables for each category of barriers. Repeat for all sectors in the paper.

iii. Prediction market data from PredictIt.org was obtained by Graziano, Handley and Limão (2021) and is available at their data repository https://zenodo.org/record/4048466#.Y-KGGnbMK1w. Graziano, Handley and Limão (2021) used daily data from PredictIt.org on the "Yes" vote succeeding in the Brexit referendum and averaged them to the monthly level. To match the time period for this paper, we consolidated their monthly data to the quarterly level. The PredictIt.org data can be used free of charge for academic research and teaching purposes.

The daily prediction market data for the UK invoking article 50 to leave the EU was obtained from Predictwise. We provide the quarterly averages of the daily data. Researchers interested in the daily data should contact Predictwise directly. Archived data for specific dates can also be found here https://web.archive.org/web/20161205225418/http://predictwise.com/politics/uk-politics

iv. Bilateral trade and domestic data for service industries from the USITC's International Trade and Production Database for Estimation (Version 1.0) as described in Borchert et al. (2021). The dataset is publicly available under the Federal Open Data Policy. https://usitc.gov/data/gravity/index.htm

v. Bilateral gravity variables are obtained from the USITC's Dynamic Gravity Dataset (Version 2.0) as described in Gurevich and Herman (2018). The full dataset is publicly available for download through the Federal Open Data Policy. https://www.usitc.gov/data/gravity/dgd.htm

vi.   Quarterly exchange rates from the Bank of England. The Bank of England allows for non-commercial re-use of their data subject to the terms of the UK's Open Government License.
https://www.bankofengland.co.uk/boeapps/database/index.asp?SectionRequired=I&first=yes&HideNums=-1&ExtraInfo=true&Travel=NIxIRx&levels=3

Computational Requirement

All code was run with STATA version 17. Code can be run from older versions of STATA after converting the dta files to earlier versions. User needs to first install the following STATA packages to run the replication code: **hdfe**, **ftools , ranktest, reghdfe, ppmlhdfe, ivreg2, ivreghdfe, outreg2 and estout**. The Stata code was last run on a 6-core Intel CPU (i7-9750H) with 32 GB RAM and a Windows 10 OS. The full replication, including data preparation, with these specifications took around 5 minutes.

Instructions for Replication Analysis

Open STATA and set its central directory to match the replication directory created. In the "Results" folder, run the *main_text_tables_figures.do* file to generate all the main tables and figures. Next run the *appendix_tables_figures.do* file to generate the appendix tables and figures. The replication package also provides users a "Data" folder that shows how the estimation datasets were prepared from raw data sources. The contents of each folder are described below.

1. Results Folder

Do files:
1. *main_text_tables_figures.do*
    Creates all of the figures and tables shown in the main text. User first needs to set the global commands at the top of the do file. The first global command sets the current working directory of the do file to the "Results" folder and the second global command saves the output from this file to the "main_tables_figures" subfolder.

2. *appendix_tables_figures.do*
    Replicates tables and figures presented in appendix text. User first needs to set the global commands at the top of the do file. The first global command sets the current working directory of the do file to the "Results" folder and the second global command saves the output from this file to the "appendix_tables_figures" subfolder.

Data files:
1. *brexit_services_main_sample.dta*
2. *brexit_services_extended_sample.dta*
3. *itpd_gravity_stri.dta*

Output files:
1. *Figures 1, 2, 3, 4 and A1 (pdf)*
2. *Tables 1 to 6 (txt/xml)*
3. *Tables A3 to A15 (txt/xml)*
4. *main_text.log (log file with all STATA output for main text)*
5. *appendix.log (log file with all STATA output for appendix)*

2. Data Folder

Do files:

1. *build_brexit_services_dataset.do*
   Prepares all the dta files used to estimate the tables and figures in the main text and appendix. Input data files, except for ITPD-E and Dynamic Gravity Version 2.0, are provided in the "Data" folder. User first needs to set the global commands at the top of the do file. The first global command sets the current working directory of the do file to the "Data" folder and the second sets the output files to be stored in the "estimation_data" subfolder.

Data files used as inputs:

1. *UK quarterly imports by services type.xlsx* (raw quarterly UK services trade data by sector and partner)
2. *OECD STRI detailed.csv* (raw OECD STRI data)
3. *OECD EEA stri.csv* (raw OECD EEA STRI data)
4. *passport_dummy.dta* (passporting risk indicator, constructed by the authors. To replicate, first go to the OECD's Policy Simulator (https://sim.oecd.org/), select the appropriate sector and country then click "view". Open the "Restrictions on foreign entry tab" and scroll to question 1.16.1. If the answer to this question is "Yes", repeat these steps using the "Intra-EEA Services Trade Restrictiveness Index" to view the EU-specific response to question 1.16.1. If the answer is "No", the passporting risk measure is coded as 1. If the answers are both "Yes" or both "No", the passporting risk measure is coded as 0.)
5. *twotothreeISO.dta* (dataset matching 2-digit and 3-digit country ISO codes)
6. *BoE exchange rates.xlsx* (exchange rates from the Bank of England)
7. *art_50_cond_ref.dta* (quarterly averages of daily contract prices on the probability of Brexit and the UK invoking article 50)

Data files used as inputs but not included in the replication folder due to large file sizes:

8. *ITPD_E_R01.csv (*download from https://www.usitc.gov/data/gravity/itpd_e_r01.zip and then save it to the "Data" folder)
9. *release_2.0_2000_2016.csv (*download from https://www.usitc.gov/data/gravity/dgd.htm and then save it to the "Data" folder)

Output files:

1. *brexit_services_main_sample.dta* (main sample data)
2. *brexit_services_extended_sample.dta* (extends the main sample data to non-EU countries without FTAs with the EU—used for results in Tables 4, A9 and A14)
3. *itpd_gravity_stri.dta (*gravity data with STRI used for results in Table A15)

Data Citations:

Bank of England. 2021. "Interest & Exchange Rates Data." https://www.bankofengland.co.uk/boeapps/database/index.asp?SectionRequired=I&first=yes&HideNums=-1&ExtraInfo=true&Travel=NIxIRx&levels=3 (accessed Aug 1, 2021).

Borchert, Ingo, Mario Larch, Serge Shikher, and Yoto Yotov. 2021. "The International Trade and Production Database for Estimation (ITPD-E)." *International Economics*, 166, 140–166.

Graziano, Alejandro, Kyle Handley, and Nuno Limão. 2021. "Replication data for: Brexit Uncertainty and Trade Disintegration." *The Economic Journal* 131, 1150–1185, data deposited at Zenodo, https://doi.org/10.5281/zenodo.4048466

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UK Office for National Statistics. 2020. "UK trade in services: service type by partner country."
      https://www.ons.gov.uk/businessindustryandtrade/internationaltrade/datasets/uktradeinservic
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Organization for Economic Co-operation and Development. 2020. "Services Trade Restrictiveness
      Index." https://stats.oecd.org/Index.aspx?DataSetCode=STRI (accessed May 31, 2020).