Instructions for replicating the results in:

"Trade Wars and Trade Talks with Data"

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Summary

To reproduce the results in MATLAB, proceed in the following steps:

1. Copy the folders "Data", "Figures", "Programs", "Results", and "Tables" as well as the files "figures.m", "results.m", and "tables.m" to a local directory on your computer.
2. Erase all saved results. In "Data", erase all folders other than "CSV files". In "Figures", erase all files but keep the folder itself. In "Results", erase all files and folders but keep the folder itself. In Tables, erase all files but keep the folder itself.
3. Enter your local directory in line 18 of "results.m", save, and run results.m. This will calculate the results from the raw data in "\Data\CSV files" using the programs in "\Programs" and save them in "\Results". Running time is around 4 days on a high-end desktop.
4. Run "figures.m" and "tables.m" in any order to produce the figures and tables from the results which will be saved in "\Figures" and "\Tables", respectively.

Details

I have provided the following folders and files:

- Data
    - CSV files
        - labels.csv
            - These are the industry labels.
        - regions.csv
            - These are the regions and their numbers.
        - sectors.csv
            - These are the industries and their numbers.
        - sigma_s.csv
            - These are the elasticities of substitution. The values in column 1 are estimated using the Feenstra (1994) method as described in the main text. The other columns list the various scalings described in the main text.
        - tariff_ijs.csv
            - These are the tariffs from the GTAP database described in the main text. They are stacked vertically by industry. In particular, if TARIFFs(i,j,s) is the tariff of country j imposed against industry s imports from country i, then the file lists [TARIFFs(:,:,1);…; TARIFFs(:,:,33)] (expressed in MATLAB terms).
        - tariff_noncoop.csv

        - These are the measures of noncooperative tariffs described in the main text. Columns are countries and rows are industries.
    - trade_ijs.csv
        - These are the trade flows from the GTAP database described in the main text. They are stacked vertically by industry. In particular, if TRADEs(i,j,s) is the trade flow from country i to country j in industry s, then the file lists [TRADEs(:,:,1);…;TRADEs (:,:,33)] (expressed in MATLAB terms).
- High_Sig
    - These files are constructed from the data in "Data\CSV files" when running "results.m" as explained below. They can be deleted if "results.m" is rerun.
- Low_Sig
    - These files are constructed from the data in "Data\CSV files" when running "results.m" as explained below. They can be deleted if "results.m" is rerun.
- Main
    - These files are constructed from the data in "Data\CSV files" when running "results.m" as explained below. They can be deleted if "results.m" is rerun.
- Med_Sig
    - These files are constructed from the data in "Data\CSV files" when running "results.m" as explained below. They can be deleted if "results.m" is rerun.
- Novar_Sig
    - These files are constructed from the data in "Data\CSV files" when running "results.m" as explained below. They can be deleted if "results.m" is rerun.

- Figures
    - These are the figures reproduced in the main text. They are constructed from the results by running "figures.m" as explained below. They can be deleted if "figures.m" is rerun.
- Programs
    - These are the programs used to compute the results. They contain comments and should be self-explanatory. As a general rule, variables ending in "s" such as TRADEs represent 3-dimensional matrices with the third dimension being the industry. Also, variables ending in "C" such as "NXC" or "Cs" such as "TRADECs" typically represent counterfactual values.
- Results
    - These are the results obtained my running "results.m" as explained below. They can be deleted if "results.m" is rerun. They are organized by type – "Optimal tariffs", "Trade talks", and "Trade wars" – and version –"High_Sig", …, "Main", …, "Novar_Sig". The results under "Main" represent the main results, the results under "Novar_Sig" the results for the version without profit shifting effects mentioned in footnotes 30, 36, and 41, and the remaining results are the sensitivity checks summarized in Panel C of Tables 3-8.
- Tables
    - These are the tables reproduced in the main text. They are constructed from the results by running "tables.m" as explained below. They can be deleted if "tables.m" is rerun.
- figures.m

    - This program generates the figures from the results in "\Results" and saves them in "\Figures". It can only be run after running "results.m".
- results.m
    - This meta program calculates the results from the raw data in "\Data\CSV files" using the programs in "\Programs" and saves them in "\Results". Even on a high-end desktop, it takes about 4 days to complete which is why I have not deleted the results from "\Results". The program has four main parts which are executed for all 5 versions discussed in the main text. In particular, the version "Main" refers to the main results, the version "Novar_Sig" refers to the results for the version without profit shifting effects mentioned in footnotes 30, 36, and 41, and the remaining versions refer to the sensitivity checks summarized in Panel C of Tables 3-8. Running "results.m" requires changing the directory name in line 18 of the code.