Documentation of Files

Amiti, Mary, Oleg Itskhoki, and Jozef Konings (2021) "Dominant Currencies: How firms choose currency invoicing and why it matters"

The main data sources are from the National Belgium Bank (NBB) – these are confidential data that authors must receive permission to use and must be used at the NBB. The rest of the data sources are publicly available. We list all of these below with information on how to access them. This documentation file is structured as follows:

- We begin by describing how the directories should be set up. We can only provide the raw data that is publicly available. For the confidential data, we list the files but these can only be accessed at the National Belgium Bank.
- We list each raw file, with a description under two broad headings, the first relates to publicly available data and the second to the confidential data.
- Within each broad category, there is a "do all" file that runs each individual file. For example, to construct the data, you just run "data do all.do". Each individual do file is listed and described below. The main categories are:
    - Data
    - Sum stats
    - Estimation

1. Structure of folders

The folders need to be organized as follows to run the code required for replication:

rawdata

data

dofiles_data

- **temp**
- **log**

dofiles_sumstats

- **temp**
- **log**

dofiles_regressions

- **temp**
- **log**

results

Note that all the files folders will be empty in the replication files except for the rawdata (with the publicly available data) and those that contain the program files.

2. Raw data files within folders

rawdata

NONCONFIDENTIAL DATA: The following files are publicly available and included in the rawdata folder:

xr_monthly_2020.dta

- updated monthly exchange rate data (source: IMF)

trade_`i'.dta (with i=2012/2019)

- Belgium imports and exports at the annual bilateral CN8 level

countrycodeconcord

- Concordance of ISO3 to ISO2 country codes

Iso_cty_and_currency.dta

- Currency codes

cty_name.dta

- Country name and iso2 code

HS2012_to_SITC2.xls and HS2017toHS2012ConversionAndCorelationTables.xlsx

- Concordances

rauch_classification.dta

- Differentiated goods at 4-digit sitc rev2

201X_H2012_exports (with X=7/9)

- COMTRADE bilateral trade at HS6 for 2017 to 2019 need to be accessed from the UN
- https://comtrade.un.org/

CONFIDENTIAL DATA: The following files are confidential files that can only be used at the NBB with permission from the NBB.

These files will need to be saved in a rawdata file one level up outside the ReplicationQJE folder (or whatever you nameit) ie ../rawdata

currency_extraEU_2017_2020

- Export currency and import currency data at firm-CN8-country-month-year level trade data for 2017m3 to 2020m11 (note: do not use 2017m1 and m2 due to errors in data)

M_20XX.dta (2012 to 2019)

- Firm-CN8-country-month-year level import data
- Data in this form was not available post-2018 so need to use data from currency data.

annual accounts update.dta

- Use nace classification to identify if firm is in manufacturing sector
- Value added, employment, capital data used to calculate tfp index

VAT_quarterly_Data.dta (2012 to 2016), vat_declaration_monthly_updated.dta (2017 and 2018), monthly&quarterly_salesVAT_2019_2020.dta (2019)

- Total inputs data at firm level at monthly and quarterly level, aggregated to annual level, used in the denominator of phi

RSZ_kwartaal (2012-2016), RSZupdate (2017-2018), RSZupdate_2021 (2019)

- Full-time equivalent number of employees and gross wage bill

iso_cty_and_currency

- Currency code by country

HS2017toHS2012.xlsx

- HS6 concordance

UN_hs2017_to_hs2012_conversion.dta

3. Do files within folders

dofiles_data

“data do all.do”

- Running this file dofiles_data folder will run all of the individual do files required to create the dataset used for estimation

The “data do all.do” file runs the following do files and saves the output in the data folder:

AggTradeData_HS4_country.do

Belgium imports and exports at the annual bilateral CN8 level, aggregated to HS4-country-year, used in the denominator of the market share variable.

- Output is saved in data/X_hs4_2012_2019 and data/M_hs4_2012_2019

B. “prepare data.do”

1. identifies manufacturing firms and products

i. identifies which firms are manufacturing, nace 2-digit = 10 to 33

2. Constructs phi variable as average for 2012-2019

i. calculates sum (across months) of extra-eurozone imports by firm-year (note ex_eu means ex eurozone)

ii. calculates sum (across quarters) of inputs by firm-year (inputs includes both manuf and services inputs)

iii. calculates sum wagebill and mean employment (across quarters) for firm-year. We drop observations with wagebill=0.

iv. combine wagebill and inputs to construct tvc, make sure only to keep nonzero and nomissing overlap of both

- Clean top and bottom 1 percentiles of average annual wage bill.
- Construct inputshare=inputs/(wagebill+inputs), and clean on top and bottom 1 percentiles of a firm’s input share relative to its median. (could alternatively clean by year to year changes)

v. Combine all components to construct mphi_xeu

- mphi_xeu=mvalue_xeu/(wagebill+inputs) by year, collapse to mean by firm.

3. time-invariant currency choice – euro vs other constructed at firm-destination level

i. we create temp/currency_vat which assigns euro=1 or euro=0 (if noneuro) by vat cty_code.

ii. creates value share in euro and value share in dollar, by firm-country. And merges in the euro dum from above

Note: we infer currency back at the firm-destination rather than firm-destination-product in avoid issue of product code changes.

4. time-invariant currency choice – prod, local, vehicle

- provides shares as well as cateogries

Output saved in data:

manuf_firm.dta

emp_wages_annual_2012to2019.dta

memp.dta (average employment between 2012 and 2019)

mphi_xeu (average across 2012 to 2019 mphi ex-eurozone by firm)

currency_vat (at vat-country level, includes share_euro, share_dollar, and a euro dum)

currency_vehicle (at vat-country, level splits currency into prod, local, and vehicle; with alternative definitions for peg adjustment)

C. phi_euro.do

This splits the phi variable into phi_euro, phi_other, and phi_missing, based on invoice currency of importing, since only ex-EuropeanUnion currency data is available, so no data for EU countries not in Eurozone.

i. calculate shares of euro/noneuro by firm-destination using currency import data from 2017-2019

ii. split phi_xeu (ie phi ex euro-zone) into share in euro and share in other and share in missing

- also saves phi_xeu_currency2019 which is mean phi variables between 2017 and 2019.

iii. combine all these variables with the exporter annual data to ensure that we drop observations for which mphi is missing and only make them zero if we know imports are zero.

- combine mphi variables with ready for annual regressions for exporters with nonmissing currency (taking care of which mphi are zero and which are missing, dropping the missings)
- do same for monthly regressions for currency choice.

Output saved in data:

Mcurrency_vat.dta (share of euro currency by firm-source country)

mphi_xeu_currency (average of 2012-2018 to be merged with annual exporting data)

phi_xeu_currency_2018 (average of 2017-2018 to be merged with monthly exporting data)

D. competitor_currency.do

Constructs share of Belgian competitors that use dollar in HS4-country-time, and share of euro, for export destinations; and share of euro by importing countries for each importer. One version is at the annual level to be used in currency choice regs, and the other version is averaged over the years to be used in annual regressions.

Output saved in data:

competitor_xcurrency_t_dollar.dta and mcompetitor_xcurrency_dollar.dta

competitor_xcurrency_t.dta and mcompetitor_xcurrency.dta

competitor_mcurrency_t.dta and mcompetitor_mcurrency.dta

E. prepare additional variables.do

Constructs firm level variables that are used as additional controls for robustness. These include, tfp index, exports shares, RD and financial variables.

Constructs export share = exports_xeu/production and splits into euro vs noneuro currency at firm-level to be used in import currency choice with average 2017-2019

Output save in data:

data/Additional_Variables.dta

More aggregate country variables saved as data/exports_country, and at hs4 saved as data/exports_hs4.dta

F. prepare_instrument_comtrade.do

This file prepares instruments for the share of competitors using other currency and dollar in the currency choice regressions. We use COMTRADE export data from country i to j for 2017 and 2018 (average values) at the HS6 level for which we exclude Belgium as an importer and exporter.

i. For the importer currency choice regressions, we calculate the share of exports from country i to nonBelgium countries that go from country i to j= US, pegged countries, and China, and collapse to the HS4-country_i level, saved as data/2017_2019_comtrade_US_sh_imp.

ii. For the exporter currency choice regressions, we calculate the share of imports to country j from nonBelgium countries that go to country i= US, pegged countries, and China, and collapse to the HS4-country_j level, saved as data/2017_2019_comtrade_US_sh_exp.dta.

G. competitor_instruments.do

Construct a measure of competitors average size and average phi within HS4-destination using 2017 to 2019 weights. Output saved as data/comp_instruments

dofiles_sumstats folder

- list of files with description is provided in the "do all sumstats.do" file. This should be run after the regression files in the next folder as it draws on the regression data for some of the sum stats.

dofiles_regs folder

- list of all files with description is provided in "do all regs.do" file.