

## Replication instructions for

### “THE WITHIN-COUNTRY DISTRIBUTION OF BRAIN DRAIN AND BRAIN GAIN EFFECTS: A CASE STUDY ON SENEGAL”

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This document provides an overview of the data files required to replicate the findings of the "*The Within-Country Distribution of Brain Drain and Brain Gain Effects: A Case Study on Senegal*". The replication files are organized into two separate folders:

1. MATLAB
2. STATA

Each folder contains files that can be executed independently of one another, and all the essential data necessary for replication is contained within each respective folder. A detailed description of the contents of each folder is provided below.

## MATLAB

This folder comprises the raw data file and MATLAB codes essential for simulating the model and conducting all quantitative analyses. The MATLAB files are categorized into two groups:

1. Primary m-file: This file must be executed to generate all the results simultaneously.
2. Secondary m-files: These files are meant to be called by the primary MATLAB file.

### Primary m-file

- *Master\_simulation\_JODE.m* – generates all the simulation results calling secondary files.

### Secondary m-files

- *Initial\_Equilibrium.m* – set of equations that define the initial equilibrium
- *Simulation\_autarky.m* – simulation of the counterfactual equilibrium when all borders are closed (i.e., migration not possible)
- *Simulation\_domestic\_autarky.m* - simulation of the counterfactual equilibrium when internal borders are closed while external borders are kept opened.
- *Simulation\_oecd\_autarky.m* - simulation of the counterfactual equilibrium when external borders are closed while internal borders are kept opened.

## STATA

This folder is divided into four sub-folders: (1) Data, (2) Do-Files, (3) Figures, and (4) Processed.

- **Data** contains the Matlab output from MATLAB.
- **Processed** contains the combination of the different policy simulations.
- **Figures** contains two sub-folders:
  - Fig5 containing the panels of figure 5;
  - Fig6 contains panels of figure 6.
- **Do-Files**
  - *data-preparation-JODE.do* – this combines together the results from the different counterfactual exercises;
  - *Figure\_5.do* – this replicates the panels of figure 5 in the indicated order;
    - *Figure\_6.do* – this replicates the panels of figure 6 in the indicated order.