README File for the replication "The Allocation of Incentives in Multi-Layered Organizations: Evidence from a Community Health Program in Sierra Leone"

Overview

The code in this replication package constructs the analysis file from 2 data sources using Stata. Two main files run all of the code to generate the data for the 4 figures and 19 tables in the paper.

The code was last run on an Apple M1-based Macbook Air with MacOS version 14.5. The replicator should expect the code to run for about 10 hours (FYI, Figure A.5 takes a long time to run).

Details on each Data Source

Data.Name	Data.Files	Location	Provided	Citation

Survey data	`data_supervisors.dta`
	`data_workers.dta`
	`data_households.dta`
		Data/	TRUE	

Computational requirements

Software Requirements

- Stata (code was last run with version 18)
  - `outreg2`
  - `coefplot`
  - `rwolf2`
  - These packages are necessary to run the main analysis file (`Analysis_Replication.do`) and all dependencies will be installed locally in the preamble of this file.
- Matlab (code was last run with Matlab_R2023b Update 7)
- Mathematica (code was last run with Mathematica 13.0.1.0)

Controlled Randomness

Random seed is in program `Analysis_Replication.do` in the following lines:

- 129
- 130

Instructions to Replicators

- Edit `Do-files/Merge_and_Clean.do` to adjust the default path.

- Run `Do-files/Merge_and_Clean.do` once to clean the field data and merge it to create the dataset for analysis.
- Edit `Do-files/Analysis_Replication.do` to adjust the default path.
- Run `Do-files/Analysis_Replication.do` once to replicate the results in the empirical section and produce the tables and figures present in the manuscript. Output files are called appropriate names (`Visits.xls`, `graph_coef_reports_overtime.png`) and should be easy to correlate with the manuscript.

The programs were last run top to bottom on September 18th, 2024.

Instructions to Replicators of Structural Analysis

- Run `Do-files/Structural_Estimation.m` using Matlab.
- Open `Do-files/Structural_Output.do` using Stata. Adjust the path name on the second line of the code.
- Run `Do-files/Structural_Output.do`. This file produces all Tables that report the results of the structural analysis.
- Open `Do-files/Counterfactuals.ng` using Mathematica. Adjust the path name on the first line of the code.
- Run `Do-files/Counterfactuals.ng. This file produces all Figures that report the results of the structural analysis, and also some Figures that show key cases of the model.`

`Note that Structural_Estimation.m relies on moments and parameters that can be replicated running Do-files/auxiliary/Structural_Inputs.do.`

These programs were last run top to bottom on October 17th, 2024.

Note also that we found some minor numerical differences (in terms of decimal points) when one replicates the structural output with a different computer (and the same version of matlab), despite the controlled randomness. These are due to minor differences in the workings of the numerical optimization algorithm.

List of tables and programs

Figure/ Table #	Program	Line Number	
Table 1	`Analysis_Replication.do`	210	`Sum Stats.xls`
Table 2	`Analysis_Replication.do`	316	`Visits.xls`
Table 3	`Analysis_Replication.do`	372	`Health.xls`
Table 4	`Analysis_Replication.do`	430	`Reporting.xls`

Table 5	Analysis_Replication.do	485	PSeffort.xls
Table 6	Analysis_Replication.do	539	Transfers.xls
Table 7	Structural_Estimation.m and then Structural_output.do	15	Table7.tex
Table 8	Structural_Estimation.m and then Structural_output.do	16	Table8.tex
Table A.1	Analysis_Replication.do	1011	Sum Stats P-values.xls
Table A.2	Analysis_Replication.do	1091	MHT.xls
Table A.3	Analysis_Replication.do	1751	APPVisitType.xls
Table A.4	Analysis_Replication.do	1807	HH_Targets .xls
Table A.5	Analysis_Replication.do	1861	More_Health_Outcomes.xls
Table A.6	Analysis_Replication.do	1914	Health_facility.xls
Table A.7	Analysis_Replication.do	1976	PS Effort More.xls
Table A.8	Analysis_Replication.do	2038	Experience.xls
Table A.9	Analysis_Replication.do	2213	Frictions.xls
Table A.10	Analysis_Replication.do	2333	Satisfaction.xls
Table A.11	Structural_Estimation.m and then Structural_output.do		TableA11.tex
Table A.12	Structural_Estimation.m and then Structural_output.do		TableA12.tex
Table A.13	Structural_Estimation.m and then Structural_output.do		TableA13.tex
Table A.14	Structural_Estimation.m and then Structural_output.do		TableA14.tex
Table A.15	Analysis_Replication.do	2419	APPVisitNoMerit.xls
Table A.16	Analysis_Replication.do	2476	Orth Merit1.xls
Table A.17	Analysis_Replication.do	2536	Orth Merit2.xls
Figure 1	Analysis_Replication.do	146	Visits.png
Figure A.1	Analysis_Replication.do	596	graph_coef_reports_overtime.png
Figure A.4	Analysis_Replication.do	681	Mediation_PS_anyserv_vill_home.png
Figure A.5	Analysis_Replication.do	812	HT_visits-CHWwealth-nonparametric.png HT_visits-PSwealth-nonparametric.png HT_PSeffort-PSwealth-nonparametric.png HT_visits-avgdistance-nonparametric.png

HT_visits-distance-nonparametric.png

HT_percHHvisit-distance-nonparametric.png