Data and Code for: Financial Spillover Effects from Electronic Government Transfers: Evidence from an At-Scale Experiment in Indonesia

Overview

The code in this replication package constructs cleaned datasets from the raw data and reproduces tables and figures from the paper using Stata. The MASTER do-file runs all of the code. The replicator should expect the code to run for 24 hours on a desktop. None of the data required to run the code in this replication package can be made publicly available. For more information on data access, please refer to the "Summary of Availability" section.

The code has been replicated independently with success in June 2024.

Data Availability and Provenance Statements

Statement about Rights

I certify that the authors of the manuscript have legitimate access to and permission to use the data used in this manuscript.

I certify that the authors of the manuscript have documented permission to redistribute/publish the code, tables, figures, and other objects contained within this replication package. Appropriate permissions are documented in the LICENSE.txt file.

License

The code is licensed under a Modified BSD License. Images, tables, text, and other items are licensed under a Creative Commons Attribution 4.0 International Public License. See LICENSE.txt for details.

Summary of Availability

SUSENAS data for March 2016 and March 2017, and PODES data may be purchased from BPS directly. The remaining datasets are confidential and may not necessarily be shared outside the Government of Indonesia. Researchers interested in accessing confidential data may contact TNP2K to discuss the possibility of negotiating a data use agreement. Please contact**:**

Sudarno Sumarto

Policy Advisor

TNP2K

Grand Kebon Sirih Lt. 5

Jl. Kebon Sirih Raya No. 35,

Jakarta Pusat, 10110 sudarno.sumarto@tnp2k.go.id

It can take some months to negotiate data use agreements. Confidential data will be stored for a minimum of five years. The authors will assist with any reasonable requests for clarification and replication for a minimum of five years following publication.

Code, tables, and figures can be made publicly available.

Details on each Data Source

1. SUSENAS datasets for March 2018 and March 2019 were obtained from the *Tim Nasional Percepatan Penanggulangan Kemiskinan*/National Team for the Acceleration of Poverty Reduction (TNP2K) and subject to a data use agreement. The general distributions of these datasets are proprietary but may be purchased from Badan Pusat Statistik (BPS, or Statistics Indonesia) website. However, the exact distributions used for this project include additional geographic codes is confidential and may not necessarily be shared outside the Government of Indonesia.

Researchers interested in accessing this data may contact TNP2K to discuss the possibility of negotiating a data use agreement. If a researcher is approved to access the data, the expected duration for negotiation is several months. Please contact Sudarno Sumarto, Policy Advisor at TNP2K at sudarno.sumarto@tnp2k.go.id. Confidential data will be stored for a minimum of five years. The authors will assist with any reasonable requests for clarification and replication for a minimum of five years following publication.

Datafiles: `blok41_gab_prop11-94_mar_18.dta, blok41_gab_diseminasi_mfd.dta, blok41_mar19.dta, blok42_mar_18.dta, blok42_mar19.dta, blok43_diseminasi_mfd.dta, blok43_mar_18.dta, blok43_mar19.dta, kor18ind_diseminasi.dta, kor18rt_diseminasi.dta, kor19ind.dta, kor19rt.dta, msbp18ind_diseminasi_mfd.dta, msbp18rt_diseminasi.dta`

2. SUSENAS datasets for March 2017 and March 2016 (Badan Pusat Statistik, 2017; Badan Pusat Statistik, 2016) are proprietary but may be purchased from the BPS website. The expected cost is roughly $3,000 to $4,000 USD.

Datafiles: `susenas16mar_ki.dta, susenas16mar_kr.dta, susenas17mar_kor17ind_a_diseminasi, susenas17mar_kor17rt_diseminasi.dta`

3. The paper uses PODES data (Badan Pusat Statistik, 2018a; Badan Pusat Statistik, 2019a), which is proprietary but available for purchase from BPS. The expected cost is roughly $400 to $800 USD.

Datafiles: `podes_2019_b1b13.dta, podes2018_desa_part1_revisi.dta, podes2018_desa_part3_revisi.dta, podes2018_desa_part4_revisi.dta`

4. Unified Database (Tim Nasional Percepatan Penanggulangan Kemiskinan, 2018-2019), or UDB, data was obtained from TNP2K under a data use agreement and is confidential. This data may not necessarily be shared outside the Government of Indonesia. Researchers interested in accessing this data may contact TNP2K to discuss the possibility of negotiating a data use agreement. If a researcher is approved to access the data, the expected duration for negotiation is several months. Please contact Sudarno Sumarto, Policy Advisor at TNP2K at sudarno.sumarto@tnp2k.go.id. Confidential data will be stored for a minimum of five years. The authors will assist with any reasonable requests for clarification and replication for a minimum of five years following publication.

5. Data on beneficiary numbers (Kementerian Sosial Republik Indonesia, 2017) was obtained from the Ministry of Social Affairs/*Kementerian Sosial Republik Indonesia* (MoSA/*Kemensos*). This data is confidential and may not necessarily be shared outside the Government of Indonesia. Researchers interested in accessing this data may contact TNP2K to discuss the possibility of negotiating a data use agreement. If a researcher is approved to access the data, the expected duration for negotiation is several months. Please contact Sudarno Sumarto, Policy Advisor at TNP2K at sudarno.sumarto@tnp2k.go.id. Confidential data will be stored for a minimum of five years. The authors will assist with any reasonable requests for clarification and replication for a minimum of five years following publication.
   Datafiles: `kpm2017_clean.dta`

6. Agent Data was provided by the state-owned banks tasked with implementing BPNT with coordination support from TNP2K. This data is confidential and may not necessarily be shared outside the banks and the Government of Indonesia. Researchers interested in accessing this data may contact TNP2K to discuss the possibility of negotiating a data use agreement. If a researcher is approved to access the data, the expected duration for negotiation is several months. Please contact Sudarno Sumarto, Policy Advisor at TNP2K at sudarno.sumarto@tnp2k.go.id. Confidential data will be stored for a minimum of five years. The authors will assist with any reasonable requests for clarification and replication for a minimum of five years following publication.

   Note: Banks requested full confidentiality. We do not display the names of the banks in our read-me file nor in the rest of the public package (redacted here with numbers).

   Datafiles: `baseline_BANK1_agent_march2018.dta, baseline_BANK2_agent_march2018.dta, baseline_BANK3_agent_march2018.dta, Data Agen BANK2. xlsx, agent_BANK1.dta, agent_BANK3.dta, baseline_BANK1_agent_march2018.dta,baseline_BANK2_agent_march2018.dta,baseline_BANK3_agent_march2018.dta`

Dataset list

Data file	Source	Notes	Provided

importable/20190523_Kab Kota Phase Expansion.xlsx	Authors		No
importable/blok41_gab_prop11-94_mar_18.dta	BPS	SUSENAS Mar. 2018	No
importable/blok41_mar19.dta	BPS	SUSENAS Mar. 2019	No
importable/blok42_mar_18.dta	BPS	SUSENAS Mar. 2018	No
importable/blok42_mar19.dta	BPS	SUSENAS Mar. 2019	No
importable/blok43_mar_18.dta	BPS	SUSENAS Mar. 2018	No
importable/blok43_mar19.dta	BPS	SUSENAS Mar. 2019	No
importable/kab_priority1_2_import.csv	Bappenas	District priority for BPNT	No
importable/kabpanel19802014usingUndangUndang.dta	Authors	District crosswalk	No
importable/kabupaten_codes.dta	Authors	District codes	No
importable/kor18ind_diseminas.dta	BPS	SUSENAS Mar. 18	No
importable/kor18rt_diseminasi.dta	BPS	SUSENAS Mar. 18	No
importable/kor19ind.dta	BPS	SUSENAS Mar. 19	No
importable/kor19rt.dta	BPS	SUSENAS Mar. 19	No
importable/kpm2017_clean.dta	MoSA	Beneficiary numbers	No
importable/msbp18ind_diseminasi_mfd.dta	BPS, TNP2K	SUSENAS Sep. 2018	No
importable/msbp18rt_diseminasi_mfd.dta	BPS, TNP2K	SUSENAS Sep. 2018	No
importable/phases_C_n.dta	Authors	Treatment Assignments	No
importable/phases_T_n.dta	Authors	Treatment Assignments	No
importable/podes_2019_b1b13.dt a	BPS	PODES 2019	No
importable/podes_desa_2014_clean.dta	BPS	PODES 2014	No
importable/podes2018_desa_part1_revisi.dta	BPS	PODES 2018	No

importable/podes2018_desa_part3_revisi.dta	BPS	PODES 2018	No
importable/podes2018_desa_part4_revisi.dta	BPS	PODES 2018	No
importable/province_names.xlsx	BPS	Province Codes	No
importable/resample1000_phase.dta	Authors	Resampling for RI	No
importable/resample1000_stacked.dta	Authors	Resampling for RI	No
importable/resample1000.dta	Authors	Resampling for RI	No
importable/susenas16mar_ki.dta	BPS	SUSENAS Mar. 2016	No
importable/susenas16mar_kr.dta	BPS	SUSENAS Mar. 2016	No
importable/susenas17mar_kor17ind_a_diseminasi.dta	BPS	SUSENAS Mar. 2017	No
importable/susenas17mar_kor17rt_diseminasi.dta	BPS	SUSENAS Mar. 2017	No
importable/treatments.dta	Authors	Treatment assignments	No
cleaned/mar_2016_baseline_pool.dta	BPS	SUSENAS Mar. 2016	No
cleaned/mar_2017_baseline_pool.dta	BPS	SUSENAS Mar. 2017	No
cleaned/mar_2018_baseline_pool.dta	BPS	SUSENAS Mar. 2018	No
cleaned/mar_2018_district.dta	BPS	SUSENAS Mar. 2018 (districtlevel)	No
cleaned/mar_2018_outcomes_full_final.dta	BPS	SUSENAS Mar. 2018	No
cleaned/mar_2018_outcomes_treats_final.dta	BPS	SUSENAS Mar. 2018	No
cleaned/mar_2019_district_lasso.dta	BPS	SUSENAS Mar. 2019	No
cleaned/mar_2019_district.dta	BPS	SUSENAS Mar. 2019	No
cleaned/mar_2019_lasso_final.d ta	BPS	SUSENAS Mar. 2019	No
cleaned/mar_2019_outcomes_full_final.dta	BPS	SUSENAS Mar. 2019	No
cleaned/mar_2019_outcomes_treats_final.dta	BPS	SUSENAS Mar. 2019	No

cleaned/mar_2019_udb_lasso_pool.dta	BPS	SUSENAS Mar. 2019	No
cleaned/podes_2018.dta	BPS	PODES 2018	No
cleaned/podes_2019_lasso.dta	BPS	PODES 2019	No
cleaned/podes_2019.dta	BPS	PODES 2019	No
cleaned/sep_2018_district.dta	BPS	SUSENAS Sep. 2018	No
cleaned/susenas_stacked_lasso_final.dta	BPS	SUSENAS Mar. 2019 and Sep. 2018 pooled	No
cleaned/UDB_SUSENAS_mar18_merge.dta	BPS	SUSENAS Mar. 2018/UDB	No
MOUNT/baseline_BANK1_agent_march2018.dta	TNP2K/BANKS	Agent Data Mar 18	No
MOUNT/baseline_BANK2_agent_march2018.dta	TNP2K/BANKS	Agent Data Mar 18	No
MOUNT/baseline_BANK3_agent_march2018.dta	TNP2K/BANKS	Agent Data Mar 18	No
MOUNT/agent_BANK1.dta	TNP2K/BANKS	Agent Data Mar 19	No
MOUNT/agent_BANK3.dta	TNP2K/BANKS	Agent Data Mar 19	No
MOUNT/Data Agen BANK2. xlsx	TNP2K/BANKS	Agent Data Mar 19	No
Cleaned/all_agent_mar2019.dta	TNP2K/BANKS	Agent Data Mar 19	No
MOUNT/data_agen_all_aug2020.dta	TNP2K/BANKS	Agent Data Aug 20	No

Computational requirements

Software Requirements

- Stata (code was last run with version 18.0, but code is operable with version 14.2 and later)
  - pdslasso 1.1 04sept2018
  - pdslasso package 1.1 15jan2019
  - lassopack package 1.0.11 06mar2023
  - estout version 3.30 25mar2022
  - grstyle version 1.1.1 15sep2020

- the program `02_Dofiles/SETUP.do` installs all the necessary packages above and our own program randinference.ado which can be found under `02_Dofiles/ado` and also added manually by the user to their own Stata base (base/r).

Controlled Randomness

• Random seeds are set to 11022022 for all the analysis (Lasso and RI) to 18271234 on `02_Dofiles/fake_kab_randomization_iterate.do`

Memory and Runtime Requirements

Summary

Approximate time needed to reproduce the analyses on a standard 2024 desktop machine: 1 day.

Description of programs/code

- The Master do-file is `02_Dofiles/MASTER.do` and runs all programs necessary to clean the data and replicate the analysis.
- The program `02_Dofiles/SETUP.do` installs the necessary packages to replicate the analysis.
- Programs in `02_Dofiles/cleaning/` clean the raw datasets referenced above and create the cleaned analysis datasets referenced above.
- Ado files are stored in `02_Dofiles/ado/` and can also be installed by running `02_Dofiles/SETUP.do`
- Programs in `02_Dofiles/analysis/` use the analysis datasets to create the figures and tables provided in the manuscript. The analysis is grouped by the level/data of outcomes (household, village, individual, agent level).

License for Code

The code is licensed under a Modified BSD License. See LICENSE.txt for details.

Instructions to Replicators

- Edit `02_Dofiles/MASTER.do` to adjust the default paths for
  - The encrypted/mounted data locations:
    - agent_data and agent_data_mar18 (lines 35 & 39)
    - udb_sep18 and udb_mar19 (lines 43 & 44)
    - The non-encrypted data locations data and importable mar18 (lines 58 & 59)

  - Rundir which defines the base code/processing/output folder location (where you saved our replication package)
    - check that lines 49 to 53 locate correctly each of the subfolders of our package on your computer.
    - We advise you to save the package in your Dropbox, which path will automatically be added in line 29.
    - You may then change the name of the Dropbox folder where our package is saved in line 30.

- Run `02_Dofiles/SETUP.do` once on a new system to install the necessary packages.
- If the data is provided to you in .dbf version, you might want to run line 79 of the master do file (which runs `02_Dofiles/Cleaning/raw_to_importable.do`). Otherwise, simply add the data file to the importable folder and you may simply ignore this step. It only needs to be run once when you receive the data for any project.
- Set the desired number of iterations for computing randomization inference p-values (1000 is used for obtaining the manuscript estimates) using the global "RI" line 19.
- Run the rest of `02_Dofiles/MASTER.do` to run all steps in sequence.
- **Note:** Analysis ster files will contain the date to which the user ran the do file in their names. The ster files are later used in the output file to retrieve the regression results and create tables. Since some of the analysis can take more than a day to run, if you run the entire code at once, you may need to adjust the names of the ster files in `02_Dofiles/output_tables.do` file with the correct date depending on your computing power. The time that it takes to reach output_tables.do might typically be one day after some of the analysis was run. To fix that issue, you can check your ster file names saved under 04_Output, and update manually lines 35, 46, 111, and 145 of `02_Dofiles/output_tables.do.`

Details

- `02_Dofiles/SETUP.do`:
  - This do-file will install all needed packages.
- `02_Dofiles/MASTER.do`
  - This do-file runs all cleaning and analysis do-files in the necessary sequence. Note that cleaning do-files run quickly, but analysis do-files take much longer to run. To quickly replicate the point estimates from the manuscript but not the randomization inference p-values, set the global "RI" to a low number such as 50.

- Confidential raw datasets with PII are stored in encrypted Veracrypt containers. To clean these datasets, mount the containers using the passwords.
- This master do-file was last tested on April 26th, 2024, and found to be correct.

List of tables and programs

The provided code reproduces selected tables and figures in the paper, as explained and justified below.

Please note that all programs listed below are stored in `02_Dofiles/analysis`, all tables listed are stored in `04_Output/tables`, and all figures listed are stored in `04_output/figures.`

All the do files listed above produce the ster files with the results that can be seen in the output, but they are all produced using: in `02_Dofiles/output.do`.

Figure/Table #	Program	Line	Output file	Note
Table 1	`household_susenas.do`; `agents.do`		`hh_credsavings_all.tex`	
Table 2	`village_podes.do`		`busi_0.tex`	
Appendix Table 1	`household_susenas.do`; `agents.do`		`hh_credsavings_all_apx.tex`	
Appendix Table 2	`household_susenas.do`		`hh_credsavings0_above.tex`; `hh_credsavings0_pmt30`	Panels A/B
Appendix Table 3	`individual_susenas.do`		`savings_ind.tex`; `savings_ind_above`; `savings_ind_pmt30`	
Appendix Table 4	`household_susenas.do`		`hh_othersocial_above.tex`; `hh_othersocial_pmt30.tex`; `hh_othersocial_full.tex`	
Appendix Table 5	`village_podes.do`		`busi_0.tex`; busi_all.tex	
Figure 1	`household_susenas.do`	211	`pkh.png`	

References

Badan Pusat Statistik. 2013-2019. “Garis Kemiskinan (Rupiah/Kapita/Bulan) Menurut Provinsi dan Daerah.” https://www.bps.go.id/indicator/23/195/2/garis-kemiskinan-menurutprovinsi.html (accessed September 12, 2019).

Badan Pusat Statistik. 2014. “Pendataan Potensi Desa/Kelurahan” Received Aug 2019.

Badan Pusat Statistik. 2016. “Survei Sosial Ekonomi Nasional 2016 (Maret)” Received January 2019.

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