

README for Replication of the paper “Can Public Credit Schemes Improve Access to Finance for Small Businesses?: Evidence from Indonesia”

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Overview

The code in this replication package constructs the analysis files from two of the five datasets used in this paper. Figures from two datasets were produced in Excel, given the facility of creating graphs showing time trends from time series datasets in Excel. One dataset is not publicly available and is not included in the replication package.

Data Availability and Provenance Statements

World Development Indicators: Data from the World Development Indicators are publicly available for free at <https://databank.worldbank.org/source/world-development-indicators>. The data used in this paper includes the series name “Domestic credit to private sector (% of GDP)”, series code FS.AST.PRVT.GD.ZS, for Indonesia (country code IDN) Low and middle income countries (country code LMY) and East Asia and Pacific (excluding high income; country code EAP). The time series used was from 2012 through 2022, and the data had been last updated on 12/18/2023.

Data from Bank Indonesia (BI): Data on lending accounts for MSMEs are available for free from Bank Indonesia (BI). Information on the number of lending accounts is available from BI (<https://www.bi.go.id/en/statistik/ekonomi-keuangan/sski/default.aspx>). To reconstruct the dataset used, replicators would need to download the zip files containing “Indonesia Financial System Statistics of Bank Indonesia (SSKI)” for different periods. Data prior to 2014 is only available in the Bahasa Indonesia version of the site.¹ The specific variables used include:

¹ To retrieve data from prior to 2014, researchers should change the language of the site to Bahasa Indonesia by changing the language from EN to ID in the top right corner of the site and downloading the first trimester data from 2015. Researchers should seek the Excel tab “UMKM.” The file is locked, and the monthly data is hidden. To access this data, researchers can copy and paste the sheet into a new Excel file using the values paste function.

- For Figure 2: The number of MSME lending accounts comes from the statistic ‘Number of Account of Total Credit’ in the table “Indicators of Financial Inclusion,” line 97.²
- For Figure 2: The total number of commercial lending accounts comes from ‘Number of Account of Total MSMEs Credit’ in the table “Indicators of Financial Inclusion,” line 98.
- For Figure 2: The % of lending accounts for MSME can be re-created by dividing the ‘Number of Account of Total MSMEs Credit’ by the ‘Number of Account of Total Credit’
- Data from OJK: Data on lending volumes are available for free from the Indonesia’s Financial Services Authority (OJK). Information on commercial lending volumes is available from OJK (<https://www.ojk.go.id/en/kanal/perbankan/data-dan-statistik/statistik-perbankan-indonesia/Default.aspx>) To reconstruct the dataset used, replicators would need to download the zip files containing “Indonesia Banking Statistic” for different dates (for example, September 2023). The specific variables used include:
- For Figure 3: The volume of MSME loans in IDR billion can be found in Table 3.19a “SMEs Credit/Financing & Micro, Small, and NPL/NPF Based on Economic Sector.” The numbers used in the paper include the Jumlah/Total line (For example, line 65 in the September 2023 report).
- For Figure 3: The volume of commercial credit in IDR billion can be found in Table 3.13a “Credit/Financing and NPL/NPF of Commercial Banks to Non Bank Third Party Based on Bank Location.” The numbers used in the paper include the Jumlah/Total line (For example, line 73 in the September 2023 report).
- For Figure 3: The % of loans for MSME can be re-created by dividing the volume of MSME loans by the volume of commercial loans from the previous 2 datapoints.

Survey of KUR borrowers: This dataset was collected for the purpose of this study. The data collection used the SIKP database as a sampling frame to draw a nationally representative sample of KUR borrowers using probability proportional to size methodology. The data was collected over the phone in January and February 2021 for 1,402 KUR borrowers. More details on the survey design, including questionnaires, are available in the package published in the Microdata Catalogue (<https://microdata.worldbank.org/index.php/catalog/6282>).

World Bank Enterprise Surveys: The 2023 World Bank Enterprise Survey is publicly available from

² Please note, the number of this table changes depending on the reporting year. For example, the Indicators of MSMEs is reported in table 18 in February 2022 and in table 23 in March 2016.

<https://login.enterprisesurveys.org/content/sites/financeandprivatesector/en/signin.html>

As World Bank employees, the authors were able to access the data by signing in with their staff credentials. External parties may access the data by registering with the Enterprise Analysis Unit and completing the Enterprise Surveys Data Access Protocol and adhering to the World Bank rules governing “strictly confidential” information. After submitting the confidentiality agreement, external parties will receive an email confirmation within 2 business days with access information.

SIKP database: Data from the SIKP include data on over 8 million borrowers from the KUR Program. The KUR Program data in the SIKP are confidential and belong to the Indonesia Coordinating Ministry for Economic Affairs. Access was received through a confidential data sharing agreement, and interested parties should contact the KUR program committee within the Indonesia Coordinating Ministry for Economic Affairs to inquire about access to the data. The researchers do not have the rights to publish or distribute this dataset and no longer have access to it at the time of working paper submission.

Statement about Rights

- I certify that the author(s) of the manuscript have legitimate access to and permission to use the data used in this manuscript.

Summary of Availability

Some data **cannot be made** publicly available.

Computational requirements

Most data analysis was conducted in STATA using STATA 17 (64-bit) on a computer running Windows 11. Once the data files are downloaded, the code should take less than 5 minutes to run.

Graphs using the World Development Indicators (Figure 1) and the data from OJK (Figures 2 and 3) were constructed using Excel after downloading the longitudinal data.

Description of programs/code

- There are five subfolders:
 - **Do file**: Contains all do file for replicating the analysis.
 - **Survey of KUR borrowers**: Raw data from the survey of KUR borrowers
 - **wbes**: Raw data from World Bank Enterprise Surveys downloaded from the WBES site
 - **Data created**: Folder for data produced using the code.
 - **Output**: All graphic outputs go here.
- Each graph has its own dedicated do file which connected to the master do file.
- Make sure to set the *cd* and all the global in master do file before running any of the analysis.
- Make sure to run **[KUR] RF05_Replication.do** before running the analysis do file. RF05 section contains complex data management, therefore it has its own do file.
- List of figures do files:
 - **Figure 4** → [KUR] Figure 4_Replication.do
 - **Figure 5** → [KUR] Figure 5_Replication.do

- **Figure 6** → [KUR] Figure 6_Replication.do
- **Figure 7** → [KUR] Figure 7_Replication.do
- **Figure 8** → [KUR] Figure 8_Replication.do
- **Figure 9** → [KUR] Figure 9_Replication.do
- **Figure 10** → [KUR] Figure 10_Replication.do
- **Figure A1** → [KUR] Figure A1_Replication.do
- **Figure A2** → [KUR] Figure A2_Replication.do
- **Figure A3** → [KUR] Figure A3_Replication.do
- **Figure A4** → [KUR] Figure A4_Replication.do
- **Figure A5** → [KUR] Figure A5_Replication.do

Instructions to Replicators

1. Set up the 5 sub-folders listed above with the same names
2. Download the Survey of KUR borrowers from the World Bank Microdata Catalogue and save the raw files in the folder Survey of KUR borrowers
3. Download the 2023 World Bank Enterprise Surveys for Indonesia from the World Bank Enterprise Surveys data portal and save the dataset in the folder wbes
4. Copy all do-files from the replication package to the Do File subfolder
5. Open the Master do file from the Do File subfolder
6. Change the file path in line 5
7. Run the Master Do File, and Figures 4-10, Table 3, and all Figures in the Appendix will be output to the Output folder.

List of tables and programs

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

Figure/Table #	Program	Note
Table 1	n.a.	Summary of information from KUR regulations
Table 2	n.a.	Summary of information from KUR regulations
Table 3	[KUR] Table 3_Replication.do	

Figure 1	n.a.	Figure created in Excel using time series data from WDI. Please see Data Availability section for details on the specific series used.
Figure 2	n.a.	Figure created in Excel using time series data from BI
Figure 3	n.a.	Figure created in Excel using time series data from OJK
Figure 4	[KUR] Figure 4_Replication.do	
Figure 5	[KUR] Figure 5_Replication.do	
Figure 6	[KUR] Figure 6_Replication.do	
Figure 7	[KUR] Figure 7_Replication.do	
Figure 8	[KUR] Figure 8_Replication.do	
Figure 9	[KUR] Figure 9_Replication.do	
Figure 10	[KUR] Figure 10_Replication.do	
Figure 11	n.a.	Figure uses SIKP data that is not publicly available and data from another published report.
Figure 12	n.a.	Figure uses SIKP data that is not publicly available.
Figure A1	[KUR] Figure A1_Replication.do	
Figure A2	[KUR] Figure 2_Replication.do	
Figure A3	[KUR] Figure A3_Replication.do	
Figure A4	[KUR] Figure A4_Replication.do	
Figure A5	[KUR] Figure A5_Replication.do	

