# Readme File for Replication Package for "The Role of Technology in Reducing the Gender Gap in Productivity"

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The replication package includes all the do-files necessary to reproduce the paper "The Role of Technology in Reducing the Gender Gap in Productivity" by Xavier Cirera, Marcio Cruz, Antonio Martins-Neto, Kyung Min Lee, and Caroline Nogueira. The main dataset used in this paper results from a multi-country survey of firm-level technology adoption developed by Cirera et al. (2020). In this particular paper, funding from the JOBS Trust Fund (0000042701) is gratefully acknowledged.

Cirera, Xavier, Diego A Comin, Marcio Cruz, and Kyung Min Lee. 2020. "Technology within and across Firms." Policy Research Working Paper, n. 9476. The World Bank.

## Data Statement

This study relies on the data from the Firm-level Adoption of Technology (FAT) survey developed by the authors for the study Cirera et al. (2020). The survey was implemented in 11 countries, including both developing and developed economies. It includes a nationally representative random sample of firms with five or more employees in agriculture, manufacturing, and services.

Our main dataset includes information on firms in advanced economies (the Republic of Korea, Poland, Georgia, and Chile), middle-income countries (Brazil, Ghana, Kenya, Senegal, and Vietnam), and low-income countries (Ethiopia and Burkina Faso). Unlike most studies exploring the gender gap in general-purpose technologies, the FAT survey offers detailed information on the adoption of several technologies across different business functions associated with general business or sector-specific business tasks.

These data are restricted and not included in the reproducibility package. The dataset will be available through the World Bank Microdata Library. Replicators can contact the authors at xcirera@worldbank.org for data access, and information on the data publication.

## Technology Environment

Paper exhibits were analyzed in a computer with the following specifications:

– OS: Windows 11 Enterprise
– Processor: 13th Gen Intel(R) Core(TM) i7-1365U   1.80 GHz
– Memory available: 31.3 GB usable

## Technology Requirements

~16 minutes runtime.

# Running the Scripts

To run the scripts, users need to change only the globals of the main Main.do file. In addition, the readme.txt file presents the purpose of each do-file

This replication package provides the codes to estimate the results of the paper "The Role of Technology in Reducing the Gender Gap in Productivity"
by Xavier Cirera, Marcio Cruz, Antonio Martins-Neto, Kyung Min Lee, and Caroline Nogueira.

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The replication package includes a file "0. Main dofile" that runs all the necessary files.

/*=====================================================================*/
*Programs to install

*ssc install outreg
*search estpost and install
*ssc install coefplot
*ssc install egenmore
*ssc install ftools
*ssc install reghdfe
*ssc install psmatch2,
*ssc install estout

*Change in directory

Please change all directories in file "O.Main dofile". Below, see a description of each code:

/*=====================================================================*/

1.Defining indexes.do // This do-file defines the managerial human capital index, the managerial quality index, and the innovation and skills index.

/*=====================================================================*/

2.Dummy_variables.do // This do-file creates dummy variables for the adoption of digital technologies associated with each general business function.

/*=====================================================================*/

3.Variable_construction_survey_design.do // This do-file creates additional variables, such as the logarithm of the technology adoption measures, as well
as defines the survey design and weights. Do-file also defines labels for most variables.

/*=====================================================================*/

4.1 Descriptives.do // This do-file prepares Table 1, Table 2, Table 3, Table 4, Table 5, Table B1, Table B2, Table B3, Table B4, Table B5, and Table B6.

/*======================================================================*/

5.Figures.do // This do-file estimates Figure 1 and Figure 2.

/*======================================================================*/

6. Adoption.do // This do-file estimates Figure 4, Figure 5, and Table 10.

/*======================================================================*/

6.1 Regressions.do // This do-file estimates Figure 3 and Tables 6, 7, 8, 9, D1, and D2.

/*======================================================================*/

7. Appendix C.do // This do-file estimates tables C1 to C4