Readme File, Replication Package for "Import Competition, Quality Upgrading, and Exporting: The Case of the Peruvian Apparel Industry"

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1 Data Availability Statement

I certify that the author of the manuscript have legitimate access to and permission to use the data used in this manuscript. I certify that the author of the manuscript have documented permission to redistribute/publish the data contained within this replication package. Some data is publicly available but cannot be redistributed and some of the data cannot be made publicly available.

The paper uses several datasets. Details of each dataset follow in this list:

1. *Encuesta Economica Anual*
    - FILE: Several Stata files in the folder "./stata_replication/Data/EEA/"
        - "eea_clean_man_F_0015.dta": merged file of all EEAs from 2000-2015
        - "'main_inputs_clean_0015.dta": merged file of modules 3, 5, and 9 of EEA from 2000-2015
    - SOURCES: Instituto Nacional de Estadística e Informática, available at http://iinei.inei.gob.pe/microdatos/
    - NOTES: Open Access. Downloaded from 2013-2018.
    - PROVIDED: Yes
2. Bilateral Trade-data SUNAT
    - FILE: "./stata_replication/Data/exports_apparel_9416.dta", "./stata_replication/Data/Modified/imports_apparel_0016.dta", "./stata_replication/Data/Modified/imp_machinery_ruc.dta.dta"
    - SOURCES: Superintendencia Nacional Tributaria

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- NOTES: Information Request via Law of Information Disclosure
- PROVIDED: No, per policy on use and re-dissemination of the data provided by the Law of Information Disclosure. However, the raw data can also be downloaded from https://www.sunat.gob.pe/operatividadaduanera/index.html

3. Bilateral Trade-data OTEXA

   - FILE: "./stata_replication/Data/US imports from Peru.xlsx", "./stata_replication/Data/US imports from China.xlsx", "./stata_replication/Data/US imports from World.xlsx"
   - SOURCES: OTEXA, available at https://otexa.trade.gov/msrpoint.htm
   - NOTES: Open Access. Downloaded in 2013.
   - PROVIDED: Yes.

4. Bilateral Trade-data COMTRADE

   - FILE: "./stata_replication/Data/imports_china_world.csv", "./stata_replication/Data/exports_china.csv",
   - SOURCES: COMTRADE, available at https://comtrade.un.org/data/
   - NOTES: Open Access. Downloaded in 2013.
   - PROVIDED: No, per policy on use and re-dissemination of UN COMTRADE data.

5. Concordance IRUC - RUC 2007-2011

   - SOURCES: Instituto Nacional de Estadística e Informática
   - NOTES: Information Request to Instituto Nacional de Estadística e Informática
   - PROVIDED: No, as they contain firm tax identifiers. I use this file to merge Peruvian customs data with *Encuesta Económica Anual*. In particular, it creates the files:
     - eea_clean_man_F_0015_ruc_apparelrel.dta
     - products_ruc.dta
     - mainproducts_apparel.xlsx'

     These two files are also not provided as identifiers can be backed up from them.

6. Peru GDP Deflator and Exchange Rate

   - FILE: "./stata_replication/Data/Modified/gdp_deflator.dta", "./stata_replication/Data/Modified/erate.dta",
   - SOURCES: Banco Central de Reserva del Perú
   - NOTES: Open Access. Downloaded in 2013.

- PROVIDED: Yes

7. Fixed Asset Tables (depreciation rates)
   - FILE: "./stata_replication/Data/NIPA_dep_rates.dta", "./stata_replication/Data/NIPA_dep_rates.csv"
   - SOURCES: Bureau of Economic Analysis
   - NOTES: Open Access. Downloaded in 2017.
   - PROVIDED: Yes
8. Aggregate Data
   - FILE: "./stata_replication/Data/data_tables_sectionIII.dta"
   - SOURCES: Several
     - Variables per_m_china, per_m_world, per_m_other: aggregate imports (in US$) from Peruvian customs.
     - Variables p_m_china, p_m_all: average CIF unit values (in US$) from Peruvian customs.
     - Variables p_perx: average FOB unit value (in US$) of peruvian exports from Peruvian customs.
     - Variables per_x_world, per_x_hq, per_x_lq, per_x_hqlw: aggregate peruvian exports from Peruvian customs (all, high-quality, low-quality, sum of high- and low-quality, respectively) from Peruvian customs.
     - Variables gr_hq and gr_lq: annual growth rate of per_x_hq and per_x_lq, respectively.
     - Variables per_m_mach : annual imports of machinery (HS 845221) from Peruvian customs.
     - Variables Sewing_Operator, Other_Op, Quality_tech, Operators, Others: percentage of different occupation types in the apparel industry, from the *Boletín de Estadísticas Ocupacionales* from the Peruvian Ministry of Labor (https://www2.trabajo.gob.pe/promocion-del-empleo-y-autoempleo/informacion-del-mercado-de-trabajo/boletin-estadisticas-ocupacional/).
     - Variables r_q_sew, r_q_op: ratio of quality supervisors to seamstress and operators, respectively, from the *Boletín de Estadísticas Ocupacionales* from the Peruvian Ministry of Labor (https://www2.trabajo.gob.pe/promocion-del-empleo-y-autoempleo/informacion-del-mercado-de-trabajo/boletin-estadisticas-ocupacional/).
     - Variables Elemental, Professional, Managers, AOperators: percentage of workers per occupation type, from the *Boletín de Estadísticas Ocupacionales* from the Peruvian Ministry of Labor (https://www2.trabajo.gob.pe/promocion-del-empleo-y-autoempleo/informacion-del-mercado-de-trabajo/boletin-estadisticas-ocupacional/).

  - Variables w_op_1049, w_sew_1049, w_op_50m, w_sew_50m: monthly wages from operators and seamstress in firms with 10 to 49 employees and more than 50 employees, respectively, from the *Boletín de Estadísticas Ocupacionales* from the Peruvian Ministry of Labor (https://www2.trabajo.gob.pe/promocio del-empleo-y-autoempleo/informacion-del-mercado-de-trabajo/boletin-estadisticas-ocupacional/).
  - Variables rmv: natioanl minimum wage in Peru, from the Peruvian Ministry of Labor.
  - Variables p_cot_A, prod_cot_peru: price of cotton type A from OTEXA, and production of cotton in Peru from Peruvian Ministry of Agriculture.
  - Variables r_ope_rmv1049, r_ope_rmv50, r_sew_rmv1049, r_sew_rmv50: ratio of monthly wages from operators and seamstress in firms with 10 to 49 employees and more than 50 employees, respectively, to minimum wage.
  - Variables nwork: Number of workers in the Peruvian apparel industry, from the *Boletín de Estadísticas Ocupacionales* from the Peruvian Ministry of Labor (https://www2.trabajo.gob.pe/promocion-del-empleo-y-autoempleo/informacion-del-mercado-de-trabajo/boletin-estadisticas-ocupacional/).
- NOTES: Open Access. Downloaded in 2014.
- PROVIDED: Yes

2 Computational Requirements

- Stata (code was last run in version 16)
- Matlab (code was last run in version 2019a)

3 Instructions for Replication

To replicate the results in the paper:

- In Stata, run the file MAIN_rep_stata.do located in ./stata_replication/Codes/.
- In Matlab, run the file master.m located in ./Matlab/.

4 Files Description

4.1 Stata Codes

All Stata codes are in ./stata_replication/. The overall folder structure is as follows:

- parent folder

- ./stata_replication/Data/
- ./stata_replication/Codes/
- ./stata_replication/Compiled/

Important: To replicate the paper from scratch, run the file main_stata.do located in the parent folder. This is the "master file". Simply run the master file to get all the numbers and plot the associated figures and tables in the main text and appendices.

4.1.1 Data folder (i.e., ./stata_replication/Data/)

The codes folder contains the following subfolders:

- parent folder; this folder contains raw data
- Modified; This folder contains intermediate files that will be created in the program as well as auxiliary files

4.1.2 Codes folder (i.e., ./stata_replication/codes/)

The codes folder contains the following scripts:

- section_2.do; This do file produces all numbers, tables and figures included in Section 2 of the main text.
- section_4.do; This do file produces all numbers, tables and figures included in Section 4 of the main text
  - data_reg.do; This creates the data for estimation
  - data_reg_aux.do; This creates the customs data for estimation
- app_A.do; This do file produces all tables and figures included in Online Appendix A.
- app_B.do; This do file produces all tables and figures included in Online Appendix B.
- app_C.do; This do file produces all tables and figures included in Online Appendix C.
- app_D.do; This do file produces all tables and figures included in Online Appendix D. It uses the subfiles
  - app_D_EEAreg.do; This do file produces the regressions with domestic data
- section_5.do; This do file produces all numbers, tables and figures included in Section 5 of the main text

4.1.3 Compiled folder (i.e., ./stata_replication/Compiled/)

The folder contains the complete set of subfolders storing all the figures and tables generated by the do files in Codes. We have provided the cleaned data files for users who wish to just directly plot a particular figure or table. However, the folder structure MUST be maintained forthe do files to work.

The folders (and associated files) are organized as follows:

- ./Figures/ ; saves all produced figures in format eps
- ./Tables/; saves all produced tables in format tex

4.2 Matlab Codes

All Matlab codes are in ./Matlab/. There are three main files:

- est_main.m ; This m file structurally estimates the sunk costs
- cf_mh_simfno4.m ; This m file performs the counterfactual of material costs
- cf_sc_simfno4.m ; This m file performs the counterfactual of sunk costs

5 List of Tables, Figures, and Numbers

All figures are stored as .eps files and all tables are stored as .tex files.

5.1 Figures

- MT_g1a and MT_g2 ; Figure 1 in main text
- MT_g1b ; Figure B1 in Appendix B
- APP_Prices_USA ; Figure B2 in Appendix B
- APP_Prices_USA_tshirts and APP_Prices_USA_shirts ; Figure B3 in Appendix B
- MT_g4a1, MT_g4a, MT_g4b_a5a, MT_g4b_a4, MT_g5a, MT_g5b ; Figure B4 in Appendix B
- APP_M_g1a and APP_M_g1b ; Figure C1 in Appendix C
- APP_M_g2a and APP_M_g2b ; Figure C2 in Appendix C
- Dcomp_0012 and Fcomp_0012 ; Figure D1 in Appendix D
- Dcomp_0010 and Dcomp_eea_0010 ; Figure D2 in Appendix D
- Dcomp_limp_0012 and Fcomp_limp_0012 ; Figure D3 in Appendix D
- Dcomp_0012 and Fcomp_us_0012 ; Figure D4 in Appendix D

5.2 Tables

- r_domf_1_f ; Table 1 in main text
- r_domf_2_f ; Table 2 in main text
- r_panel0012_a and r_panel0012_b ; Table 3 in main text
- r_domf_dom_iv_1 and r_domf_dom_iv_allfactors ; Table 4 in main text
- Results from section5.do and est_main.m ; Table 5 in main text
- Result printed in app_A.do ; Table A1 in Appendix A
- Information request to SUNAT; Table A2 in Appendix A
- Information request to Peruvian Ministry of Labor ; Table A3 in Appendix A
- table1a ; Table B1 in Appendix B
- table2a ; Table B2 in Appendix B
- des_dcomp_fcomp ; Table D1 in Appendix D
- fs_domf_1a ; Table D2 in Appendix D
- app_r_domf_1 ; Table D3 in Appendix D
- app_r_domf_2 ; Table D4 in Appendix D
- r_domf_dom_ols_1 ; Table D5 in Appendix D
- r_domf_dom_ols_4 ; Table D6 in Appendix D
- r_domf_dom_2 ; Table D7 in Appendix D
- app_des_dcomp_fcomp_limp ; Table D8 in Appendix D
- app_fs_domf_limp ; Table D9 in Appendix D
- r_domf_limp_1 ; Table D10 in Appendix D
- r_domf_limp_2 ; Table D11 in Appendix D
- r_domf_shne_1 ; Table D12 in Appendix D
- r_domf_shne_2 ; Table D13 in Appendix D
- r_domf_shne_1 ; Table D12 in Appendix D
- app_fs_domf_ains ; Table D14 in Appendix D
- r_domfo_1 ; Table D15 in Appendix D
- r_domfo_2 ; Table D16 in Appendix D
- r_domf_us_1 ; Table D17 in Appendix D
- r_domf_us_2 ; Table D18 in Appendix D
- r_dom_1 ; Table D19 in Appendix D
- r_dom_2 ; Table D20 in Appendix D
- r_dom05_1 ; Table D21 in Appendix D

- r_domf_2000_1 ; Table D22 in Appendix D
- r_domf_2000_2 ; Table D23 in Appendix D
- r_domfb_1 ; Table D24 in Appendix D
- r_domf_hst_1 ; Table D25 in Appendix D
- section5.do ; Table E1 in Appendix E
- section5.do ; Table E2 in Appendix E
- section5.do ; Table E3 in Appendix E
- est_main.m ; Table E4 in Appendix E