

“Trade, Quality Upgrading, and Input Linkages: Theory and Evidence from Colombia”
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README file for data and data-related programs

The empirical analysis in this paper uses proprietary establishment level data from a database constructed by the authors using information from the Colombian Annual Manufacturing Survey (AMS). The AMS is housed at the Colombian *Departamento Administrativo Nacional de Estadísticas* (DANE). For approved projects and for statistical purposes only, the plant-level and plant-product-level data used for this project can be accessed at DANE. For access to the data, interested users must contact the Dirección de Metodología and Producción Estadística. Instructions are available at: <http://www.dane.gov.co/files/investigaciones/industria/eam/pasos.html>

The FEX_AER_programs.rar file contains the programs for generating the tables and figures in the paper that come directly from the data, as well as a folder “external databases” with databases used by the programs containing public domain data. For replication, follow this instructions:

1. Obtain access to the AMS microdata from DANE. Under current rules, they will assign approved users a user name in their system. Once into the system, and under the rules for processing imposed by DANE, which currently include on-site processing, you would be able to access and process the microdata to which DANE granted you access. The programs in this file use the raw databases obtained from DANE and processes them until obtaining the results in the paper
2. Unzip the package to the user assigned to you by DANE in DANE’s system. Make sure to extract routes as well, for the programs to run properly. Unzipping should have saved the material to a folder within your DANE user called FEX_AER_programs, with subfolders created by unzipping.
3. Create a subfolder \Results\db. That is, you should now have within your user a subfolder “FEX_AER_programs\Results\db\”

The programs that you should run are located in FEX_AER_programs, and are listed below in the order in which they must be processed. Some of them run subroutines that were also saved when unzipping. Follow the instructions in red below before running each program:

0.master do price indices.do: This program generates plant level price indices for inputs and outputs used in Table 12. It runs the sub-routines and sub-sub-routines in the subfolder \prices of the unzipped folder. These routines first organize input (product) level databases and then create the index for inputs (outputs). **You must modify the routes to programs in this master file, under “Program parameters” at the beginning of the program.** Instructions are included in the program.

1. Reading raw database AMS-82-88.sas: This program reads original plant-level AMS files from DANE for years between 1982 and 1988. You should obtain these files from DANE and **modify the routes and filenames for the databases called by this program under the line that begins “/*Modify routes...”**. Follow instructions in that line. **Modify also the route in the last procedure of the program “PROC EXPORT”, to change “TC1_MARCELA**

ESLAVA” to the user assigned to you by DANE. Other than this, the program should run without modifications.

2. Master do tables.do: This program adds data for 1994 and generates the figures reported in the tables. It runs the sub-routines numbered 2.0 to 2.12 in the same folder. Routines 2.0 to 2.5 create the database. Routines 2.5 to 2.9 generate the figures reported in tables; preceding the line where this master file runs each subroutine we have indicated the number of the table or tables to which results of the subroutine correspond. Routines 2.9 to 2.12 generate numbers reported in the appendix. **You should modify the routes under “Program’s parameters” at the beginning of the code, following instructions contained in that section.**

Important note: the sub-routine 2.6 creates the numbers for tables 7, 8, 10 and 13 of the paper. The exported excel databases containing the results, and the comments internal to the code, refer to tables 4, 5, 7 and 10 (numbering in a previous draft). These are respectively, tables 7, 8, 10 and 13 of the published paper.

Beyond programs, the zip file contains a few public domain databases. These are listed below together with their respective sources:

- **Correlative_CPC_CIIU.dta.** Concordance table between CPC product codes and CIIU (ISIC) sector codes. November 2004 version of the official concordance table.
Source: DANE.
- **trade_sic3_DNP.dta.** Imports and exports at the three-digit level of ISIC revision 2. The original data, downloaded from <https://www.dnp.gov.co/programas/desarrollo-empresarial/comercio-exterior-e-inversion-extranjera/Paginas/estadisticas.aspx>. is found in excel files XCIU.xls and MCIU.xls in subfolder “building external databases”. Master do file “Master external databases creation” runs the routine trade-sic3.do that generates, from these excel files, the database trade_sic3.dta used by the programs. Both do files are found in subfolder “building external databases”
Source: Departamento Nacional de Planeación (DNP)
- **ippm_09_8209.dta.** PPI, 2009 as base year. Original data can be downloaded from: <http://www.banrep.gov.co/es/ipp>
Go to the link in “Total según actividad económica” below the title “IPP - Serie Banco de la República (base=1999) empalmada con la serie de datos producida por el DANE (base=2006)”. This downloads the file “1.1.2.IPP_Total según actividad económica IQY.xlsx”.
The downloaded excel database is contained in the subfolder “FEX_AER_programs/building external databases”. Master do file “Master external databases creation.do” runs the routine “IPPM_09 import.do” that generates, from these excel files, the database used by the programs. Both do files are found in subfolder “building external databases”.
Source: Banco de la República.