

Overview

This document describes the files used to replicate the econometric analysis for the article “Crop Supply Dynamics and the Illusion of Partial Adjustment” published in *American Journal of Agricultural Economics*.

The field-level data used in the analysis are provided in the Stata dataset “data.dta”

This analysis was conducted on a PC with 16 GB of RAM using Stata/IC. The code is not likely to work on a PC with 4 GB of RAM or less.

Note: If you open the do-files by double-clicking on the icon for the do-file, then Stata’s directory will automatically be set to the folder containing the do-file and the do-files will run correctly. Otherwise, you will need to add a line of code to change the directory to the folder containing the particular do-file.

Replicating results in table 2, table 3, and figure 5

All of the do-files are in the folder “preferred.”

1. Run “create rotational dataset.do”
2. Run “create extensive dataset.do”
3. Run “GC execute.do” This estimates the coefficients and elasticities for the rotational and extensive margins. This do-file will call the do-files “GC rotational program” and “GC extensive program” which define programs to estimate linear Markov transition probability models and calculate the marginal effects.
4. Run “GC bootstrap rotational.do” This estimates bootstrap standard errors for all rotational margin estimates. This will call the do-files “GC rotational program” and “GC rotational program – wild.”
5. Run “GC bootstrap extensive.do” This estimates bootstrap standard errors for all extensive margin estimates. This will call the do-files “GC extensive program” and “GC extensive program – wild.”
6. Run “standard error of total elasticity.do” This estimates the standard error of the sum of the rotational and extensive margin elasticities using the saved bootstrap results from the previous two steps.

Replicating results in table 1

All of the do-files are in the folder “descriptive stats.”

- First you will need to create the rotational and extensive margin datasets. See the previous section.
- Run “descriptive stats.do”

Replicating results in table 4

All of the do-files are in the folder “pooled.”

- To replicate column 1: Run “pooled transitions execute.do” to get the elasticity estimates and run “pooled transitions bootstrap.do” to get bootstrap standard errors.
- To replicate columns 2-4 run “pooled OLS FE AB estimators.do” No bootstrap is necessary to obtain standard errors for these estimators.

Replicating results in table 5

All of the do-files are in the folder “aggregate panel.”

- To replicate columns 1-5: Run “NASS county-level analysis.do”
- To replicate column 6: Run “random group analysis.do”

Replicating results in the appendix

All of the do-files are in the folder “appendix”

- To replicate table A1: In the subfolder “two-year transition” run the do-file “create data for 2yr models.do”, then run “execute – 2 yr transitions.do” to get elasticity estimates and run “bootstrap – 2yr transitions.do” to estimate standard errors.
- To replicate column 1 of table A3: In the subfolder “fertilizer” run the do-file “fertilizer price – execute.do” to get elasticity estimates and run “fertilizer price – bootstrap.do” to estimate standard errors.
- To replicate column 2 of table A3: In the subfolder “fertilizer” run the do-file “fertilizer price instrumented – execute.do” to get elasticity estimates and run “fertilizer price instrumented – bootstrap.do” to estimate standard errors.