REPLICATION CODES AND DATA

Risk Attitudes, Sample Selection and Attrition in a Longitudinal Field Experiment

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1. General Information

We have used *Stata 15* to write and execute all of the enclosed codes and data. We note that the MSL estimation of our structural models is a very computer intensive task. In our computing environment described in Section 3, for example, estimating all models that the enclosed codes replicate took a total of 610 hours (i.e. 25 days and 10 hours).

After extracting the .TAR file, users will be able to access a parent folder that contains the following items.

`DK_2009_SS.DTA` is a data file that includes variables relevant to replication of the estimation results reported in our paper, including the online appendices. Each variable comes with a label that explains its definition.

`MAIN.DO` is a "front end" program that allows users to choose specific sets of results to replicate, and execute relevant "back end" programs.

`PROGRAMS>` is a folder that collates all "back end" programs that are relevant to replication of our estimation results. They are not intended to be run as standalone programs. Users should use `MAIN.DO` to execute these "back end" programs, instead of executing each program directly.

`RESULTS>` is an empty folder. Once users run MAIN.DO to estimate specific models, the relevant "raw" output will be saved to this folder. The saved output is "raw" in the sense it refers to computationally convenient parameterization instead of economically relevant parameterization that we report in our tables (e.g. Cholesky factors instead of standard deviations and correlation coefficients).

`TABLES>` is a folder that has two empty subfolders, `CONTEXT>` and `FECHNER>`. Once users run MAIN.DO to use "raw" results in `RESULTS>` to create the tables of results that we report in the paper, the tables will be saved to these two subfolders. `CONTEXT>` and `FECHNER>` collate the tables for contextual utility and Fechner error specifications, respectively. Recall that our main analysis is based on contextual utility specifications.

`GRAPHS>` is a folder that has two empty subfolders, `CONTEXT>` and `FECHNER>`. Once users run MAIN.DO to use "raw" results in `RESULTS>` to create the figures that we report in the paper, the figures will be saved to these two subfolders. `CONTEXT>` and `FECHNER>` collate the figures for contextual utility and Fechner error specifications, respectively.

`AUTHOROUTPUT>` is a folder that collates our own estimation results. These results have been organized into subfolders `RESULTS>`, `TABLES>CONTEXT>`, `TABLES>FECHNER>`, `GRAPHS>CONTEXT`, and `GRAPHS>FECHNER`, just as users' replication results will be. To obtain the results, we used a *Windows 10* desktop and *Stata/MP 15*, utilizing 4 processors for parallel computing. We share more detailed information on our computing environment in Section 3.

2. Summary of Back End Programs

Folder PROGRAMS> collates 32 back end program files relevant to replication of our results. Our front end MAIN.DO includes in-program comments that explain which back end program is used for replicating which specific sets of results. Instead of going over each of the 32 files, we will focus on summarizing the main categories of the back end programs.

MATAFUNCTIONS_RA.DO contains simulated likelihood evaluators for all random coefficient models that we have reported in the paper. The program also contains exact likelihood evaluators for fixed coefficient models that we estimated to obtain starting values for the random coefficient models. Both types of evaluators have been coded in *Stata*'s matrix-based programming environment, known as *Mata*.

MSLINIT.DO creates matrix objects that our simulated likelihood evaluators require as inputs, such as a matrix of subject- and wave-specific Halton draws.

ANALYSIS_*stub*.DO: Each file prefixed by ANALYSIS estimates specific model specifications that vary from *stub* to *stub*. The results are based on "raw" or computationally convenient parameterization of each model specification (see Section 1). Each ANALYSIS_*stub*.DO will save all relevant "raw" estimates as Stata output files with .STER extensions, and place them in RESULTS>. When users run MAIN.DO to execute ANALYSIS_*stub*.DO, a namesake log file with a .LOG extension will be added to RESULTS> to keep a record of any output that appears in *Stata*'s results window.

MSLdisplayY.DO, MSLdisplayN.DO, and MSLdisplayA.DO generate a series of "global macros" (roughly speaking, *Stata*'s shorthand for lengthy expressions) that help us to simplify command lines that transform "raw" estimates in RESULTS> into the estimates that we report in our tables. Suffixes Y, N and A indicate that the macros are for models making correction for selection and attrition bias (Y), no correction (N), and correction for attrition bias only (A).

TABLES_RA_INIT.DO reads in the data file. This step is needed before running other files prefixed by TABLES because some of derived statistics (e.g. the standard deviation of a log-normal random coefficient) are evaluated at the sample mean of observed characteristics.

TABLES_*stub*.DO: Each of the remaining files prefixed by TABLES processes some "raw" estimates in RESULTS> into specific tables of results that we report in the paper. The tables in question vary from *stub* to *stub*, and will be saved to TABLES>CONTEXT> or TABLES>FECHNER> as appropriate.

GRAPHS_ALL.DO processes "raw" estimates in RESULTS> to generate all figures pertaining to Fechner error specifications. The figures are saved to GRAPHS>FECHNER>.

GRAPHS_ALL_CONTEXT.DO processes "raw" estimates in RESULTS> to generate all figures pertaining to contextual utility specifications. The figures are saved to GRAPHS>CONTEXT>.

3. Computing Environment

We obtained all of our estimation results using *16-core Stata/MP 15.1 for Windows (Software revision: 06 June 2018)*, utilizing 4 processors for parallel computing. The operating system for our desktop was a Danish version of *64-bit Windows 10 Home Edition* (*Version: 1803, OS build: 17134.48*). The exact specification of our desktop was as follows.

1. CPU: AMD - Threadripper 1950X 3.4GHz 16-Core Processor

2. CPU Cooler: Noctua - NH-U14S TR4-SP3 140.2 CFM CPU Cooler

3. Motherboard: Asus - ROG ZENITH EXTREME EATX TR4 Motherboard

4. Memory: Corsair - Vengeance LPX 16GB (2 x 8GB) DDR4-3200 Memory

5. Storage: Seagate BarraCuda 1TB 3.5" 7200RPM Internal Hard Drive

6. Video Card: MSI - GeForce GT 710 2GB Low Profile Video Card

7. PSU: EVGA - SuperNOVA G3 (EU) 750W 80+ Gold Certified Fully-Modular ATX Power Supply