

SPLIT-PANEL JACKKNIFE ESTIMATION OF FIXED-EFFECT MODELS

README FOR REPLICATION MATERIAL

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This document provides an overview of the Matlab files to replicate the numerical results in the paper. The files are available in the folder *Replication Material*.

1. SIMULATIONS

The subfolder *Simulations* contains Matlab codes to replicate Tables 1–7 and Table 10 in the main text and Table S.2 in the Supplementary Appendix. The main file to replicate Table X is `TableX.m`. The other files contain auxiliary routines that are called by the main files. An overview of these auxiliary files follows.

Data generating processes

`GENERATE.m`: Calls the following two routines:

`GENProbitARX1.m`: Generates data for probit designs of Table 3.

`GENLogitARX1.m`: Generates data for logit designs of Table 6.

Optimization

`UNIQUENESS.m`: Checks for separation in binary data (cf. Section 7 in the Supplementary Appendix).

`NewtonPartitionedMax.m`: Efficient Newton-Raphson algorithm using sparsity of the Hessian.

`NewtonRaphsonMax.m`: Newton-Raphson algorithm for optimizing the concentrated likelihood.

Maximum-likelihood estimation

`ML.m`: Main routine for maximum-likelihood estimation.

`LoglProbitAR1.m`: Log-likelihood for autoregressive probit model.

`LoglProbitARX1.m`: Log-likelihood for autoregressive probit model with a covariate.

`LoglLogitARX1.m`: Log-likelihood for autoregressive logit model with a covariate.

`CONLoglProbitAR1.m`: Concentrated log-likelihood for autoregressive probit model.

`CONLoglProbitARX1.m`: Concentrated log-likelihood for autoregressive probit model with a covariate.

`CONLoglLogitARX1.m`: Concentrated log-likelihood for autoregressive logit model with a covariate.

`FELoglProbitAR1.m`: Log-likelihood for fixed effects for autoregressive probit model.

`FELoglProbitARX1.m`: Log-likelihood for fixed effects for autoregressive probit model with a covariate.

`FELogLogitARX1.m`: Log-likelihood for fixed effects for autoregressive logit model with a covariate.

Split-panel jackknife estimation

`SPJ.m`: Jackknife correction to the estimator.

`SPJL.m`: Jackknife correction to the concentrated log-likelihood.

`SPLITPANEL.m`: Determines the data splits and corresponding jackknife weights for SPJ and SPJL.

Analytical bias-correction estimators

`HK.m`: Hahn and Kuersteiner (2011) correction (HK).

`DLoglProbitARX1.m`: Likelihood quantities for HK correction in probit model.

`DLoglLogitARX1.m`: Likelihood quantities for HK correction in logit model.

`FV.m`: Fernandez-Val (2009) correction (F).

`FProbitARX1.m`: Likelihood quantities for F correction in probit model.

`FLogitARX1.m`: Likelihood quantities for F correction in logit model.

`AH.m`: Arellano and Hahn (2006) correction (AH).

`DDELoglProbitARX1.m`: Likelihood quantities for AH correction in probit model.

`DDELoglLogitARX1.m`: Likelihood quantities for AH correction in logit model.

`CARRO.m`: Carro (2007) correction (C).

`CProbitARX1.m`: Likelihood quantities for C correction in probit model.

`CLogitARX1.m`: Likelihood quantities for C correction in logit model.

2. EMPIRICAL APPLICATION

The subfolder *Application* contains the data for the empirical application (`lfp_psid.fs.txt`) as well as the Matlab files to replicate Table 11 in the main text (`Table11a.m`, `Table11b.m`) and Tables S.3–S.4 in the Supplementary Appendix (`TableS3.m`, `TableS4.m`).