

# Maximum Likelihood Estimation

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## Input files (these are the output files from the data folder):

**index.csv** contains columns as h-indexes of varying combination of parameters. The list of h-indexes and column numbers are stored in "index directory.xlsx"

**authdata.csv** contains author level information in the following order: fixedname schoolname nrc ranking of the school, tenure dummy, years of working after PhD as in 2011-2012, field weights from behavioral to macro, position

## Programs:

**MLE.m** is the main program that reads in data, executes estimation and produces output. It calls the following two programs.

In order to find the highest log likelihood, we have tried various starting values. MLE.m gives examples of starting values we have tried. One set of starting values are the estimates derived from an earlier data set, which is stored in the file **start.mat**. Not all final results were derived using this set of starting values.

**llhprobit.m** is the average log likelihood evaluator for the ordered probit model. Its only explicit input argument is the parameter vector to be estimated; the data, the number of schools and the number of adjustment variables are passed into the program by global variables.

**llhlogit2.m** is the average log likelihood evaluator for the logit model. Its only explicit input argument is the parameter vector to be estimated; the data, the number of schools and the number of adjustment variables are passed into the program by global variables.

## Output files:

**Outsheet.mat** stores the results generated by MLE.m.

**Nov 13 MLE results.xlsx** copies content of outsheet.mat into spreadsheet with filter and sorting function and compare the log likelihood. All MLE results in the paper is contained in this spreadsheet.