This document explains how to replicate PEG’s SUR model estimation of an econometric cost function.

First, the user needs to have a working version of R installed on their machine. This program can be downloaded for free at <https://cran.rstudio.com/>. Once R is installed, the contents of PEG-WP-3.zip should be saved in a directory. For the remainder of this document the directory where the contents of PEG-WP-3.zip are saved will be referred to as [dir].

Once the files are saved in [dir], the user needs to open the file called ControlModule.R in the R GUI. At the top of the ControlModule.R file the user is asked to specify 3 path variables: FuncPath, datapath, and outPath. FuncPath should be a string variable specifying the full location of the file titled SURModelEstFun.R. dataPath should be a string variable specifying the full location of the file titled bmyd1995.csv. outPath should be a string variable specifying the location to which the output should be saved. The output will be saved as a output.txt file. After the user has specified the 3 path variables, the lines that are currently written as:

FuncPath = “”

dataPath = “”

outPath = “/output.txt”

should now be written as:

FuncPath = “[dir]/SURModelEstFun.R”

dataPath = “[dir]/bmhyd1995.csv”

outPath = “[dir]/[file\_name].txt”

**Please note that for a windows machine, R requires forward slashes instead of backward slashes for separating directories in the file path.**

After the file path variables are specified, the user should save the edited ControlModule.R file and then source ControlModule.R. If code runs correctly, the user should see the output file in the location specified in outPath. The output file shows the coefficient estimates, standard errors, t-statistics and p-values of the estimates. At the bottom of the output file are several goodness of it statistics for the whole model. For variables definitions, please refer to Table 7 of the PEG report.