Basic Commands for R – Economics 113

Loading Data:
“datasetname”<‐read.table(“file name”, header=TRUE)

Example: x<‐read.table("C:/WageData.TXT", header=TRUE)

Important!!!! The filename needs to point to where the data are located. "C:/WageData.TXT" is just an example. If your data is not located there, you will get an error!!!

the command str() lists the variables in your dataset, and summarizes the type of each variable
str(x)

the command summary() summarizes each variable in the data set, giving the mean, median, min, and max
summary(x)

to summarize a single variable, write summary("datasetname"$"variable name")
summary(x$wage)

The commands, mean, var, and cor calculate means, variance/covariance, and correlation

When using mean, var, or cor, make sure you end the command with “na.rm=TRUE”. This drops observations that are labeled as missing. For example:

mean(x,na.rm=TRUE), or for wage mean(x$wage,na.rm=TRUE)

**Regression Commands**

The standard regression command in R is

lm("regression equation", "datasetname")

For example, to regress log wage on education, experience, tenure, mother’s education, and father’s education, we write:

Reg<‐lm(log(wage)~educ+exper+tenure+meduc+feduc,x)

Here, “Reg” is the name of the regression object. Writing “Reg” on the command line will report the regression estimates, but nothing else. However, if you write the following,

summary(Reg)

you will receive the full results of the regression, including homoskedastic standard errors, t-statistics, R-squared values, and other information.

You can easily run regressions using subsets of the full sample. The following regression estimates the determinants of wages for only urban survey respondents.

RegUrban<‐lm(log(wage)~educ+exper+tenure+meduc+feduc,subset(x,urban==1))

To call residuals, if your regression object is called “Reg”:

Reg$residual

To call the degrees of freedom:

Reg$df

If you want use a function of a variable within a regression expression, use the l() wrapper:

RegSquared<‐lm(log(wage)~educ+l(educ^2)+exper+tenure+meduc+feduc, data)