Econometrics with R

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Fall/2018

Quiz 1

November 16,

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Software: R

Format: R script, R markdown

Max Pts. = 100

Install R package “Wooldridge”:

install.packages("wooldridge")

library(wooldridge)

Use the data in WAGE2.RAW(information can be found using command ?wage2 in R console) for this exercise.

**(1, Pts. 10)** Estimate the simple regression model:



Based on this regression calculate (x=educ, y=log(wage))



and show that it consistent with results of **lm** function in R.

(2, **Pts. 10**) Based on this regression calculate standard error of slope (x=educ, y=log(salary))



Where



and show that it consistent with results of **lm** function in R.

(3, **Pts. 10**) Based on this regression calculate standard R square (x=educ, y=log(salary))



SStot - is the sum of squared deviations of each y value from the mean of y

SSres – is the sum of squared residuals of regression

and show that it consistent with results of **lm** function in R.

(4 **Pts. 70**)

Estimate the model in which log(wage) is dependent variable and all others variables in data set are independent. Add the variables *exper^* 2 and *tenure^*2 to the equation as independent variables. Compute stepwise regression (“backward”) and report the results in the usual form. Comment on the five most important regression results.