

Microeconometrics Using Stata

STATA BASICS: EXERCISES

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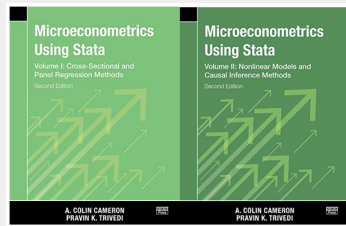
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Exercise 1

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Find information on the estimation method **clogit** using **help** and **search**. Comment on the relative usefulness of these search commands.

Exercise 2

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Exercise 2

Download the Stata example dataset **auto.dta**. Obtain summary statistics for **mpg** and **weight** according to whether the car type is foreign (use the **by foreign:** prefix). Comment on any differences between foreign and domestic cars. Then, **regressmpg** on **weight** and **foreign**. Comment on any difference for foreign cars.

Exercise 3

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Exercise 3

Write a do-file to repeat the previous question. This do-file should include a log file. Run the do-file, and then use a text editor to view the log file.

Exercise 4

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Exercise 4

Using `auto.dta`, obtain summary statistics for the `price` variable. Then, use the results stored in `r()` to compute a scalar, `cv`, equal to the coefficient of variation (the standard deviation divided by the mean) of `price`.

Exercise 5

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Exercise 5

Using `auto.dta`, regress `mpg` on `price` and `weight`. Then, use the results stored in `e()` to compute a scalar, `r2adj`, equal to \bar{R}^2 . The adjusted R^2 equals

$$\bar{R}^2 = R^2 - (1 - R^2) \left(\frac{K - 1}{N - K} \right)$$

where N is the number of observations and K is the number of regressors including the intercept. Also, use the results stored in `e()` to calculate a scalar, `tweight`, equal to the t statistic to test that the coefficient of `weight` is zero.

Exercise 6

EXERCISE 6

Exercise 6

Using `auto.dta`, define a global macro named `varlist` for a variable list with `mpg`, `price`, and `weight`, and then obtain summary statistics for `varlist`. Repeat this exercise for a local macro named `varlist`.

Exercise 7

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Exercise 7

Using **auto.dta**, use a **foreach** loop to create a variable, **total**, equal to the sum of **headroom** and **length**. Confirm by using **summarize** that **total** has a mean equal to the sum of the means of **headroom** and **length**.

Exercise 8

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Exercise 8

Create a simulated dataset with 100 observations on two random variables that are each drawn from the uniform distribution. Use a seed of 12345. In theory, these random variables have a mean of 0.5 and a variance of $1/12$. Does this appear to be the case here?

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