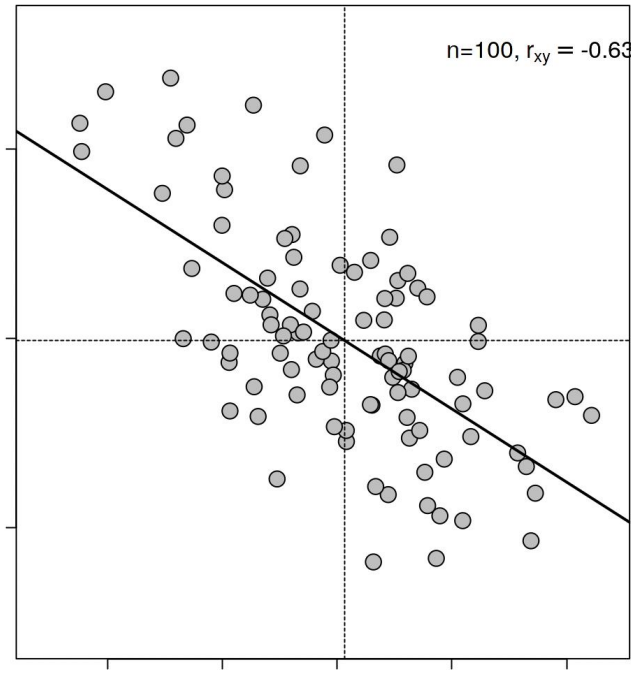
Fundamentals of Econometrics Models



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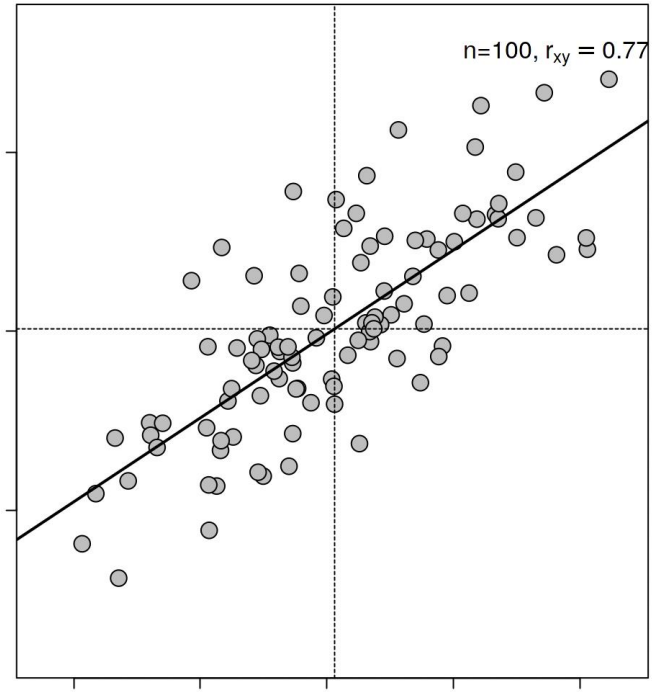

SESSION 5

-TIME TO FLY ON YOUR OWN-

Time to fly on your own

Exams are important because they influence what we will be allowed to do or not. For example, studying a Bachelor in Business Administration or not.

However, there are many variables that can influence our results. Some of them are under our control (time spent studying vs watching Netflix), but some others are not (our family level of graduation).

Time to fly on your own

Today, you will analyze –by groups- a dataset about academic results of students. Your main objective is explaining:

What matters -and what doesn’t- for getting good grades?

Time to fly on your own

You have a dataset called “student_performance.csv”, including the following variables:

- **Gender:** 1 for males, 0 for females
- **Age:** age of the student
- **Mother educated:** 0 (not educated) to 4 (mother has a PhD)
- **Father educated:** as in the previous case
- **Travel time:** how much it takes to get to school (0 = little, 4 = a lot)
- **Study time:** how much time the student devotes to study (0 = little, 4 = a lot)
- **School support:** is the student enrolled in a support program (1) or not (0)
- **Familiar relationship:** how happy is the student with his/her family (0 = little, 5 = a lot)
- **Free time:** does he/she has free time? (0 = little, 5 = a lot)
- **Go out friends:** how often he/she goes out with friends (0 = never, 5 = a lot)
- **Alcohol consumption:** how often he/she drinks alcohol (0 = never, 5 = a lot)
- **School absences:** how many days he/she missed the class
- **Grade 1/2/3:** grades for each term. **Calculate the average of the 3 grades and use it as dependent variable! And forget the other grades**

Turn in (optional)

File to submit:

- R script file containing the instructions run in R (text file named group names.R)
- Add comments (using #) explaining what you do at every step
- Add conclusions at the needed steps and also at the end.

Example of R script file

#Group members: ….
#We open the dataset:
data=read.csv2(…
……
#Now check for the collinearity:
….
….
#Multiple linear regression:
……
#The interpretation of the multiple linear regression is:
#…..
…… and more….

Turn in (optional)

- Don’t forget:
  - Open the file
  - Analyze if collinearity
  - Run:
    - Multiple linear regression excluding the non-significative variables
    - Several Simple linear regressions
  - For all the cases:
    - Explain the relationships between the dependent variable and the independent/s variable/s
    - Add (at least) a plot between an independent variable (X) and the dependent variable for every run, adding the regression line
  - Compare the regressions using stargazer
  - Don’t forget to describe conclusions (short) for every analysis.

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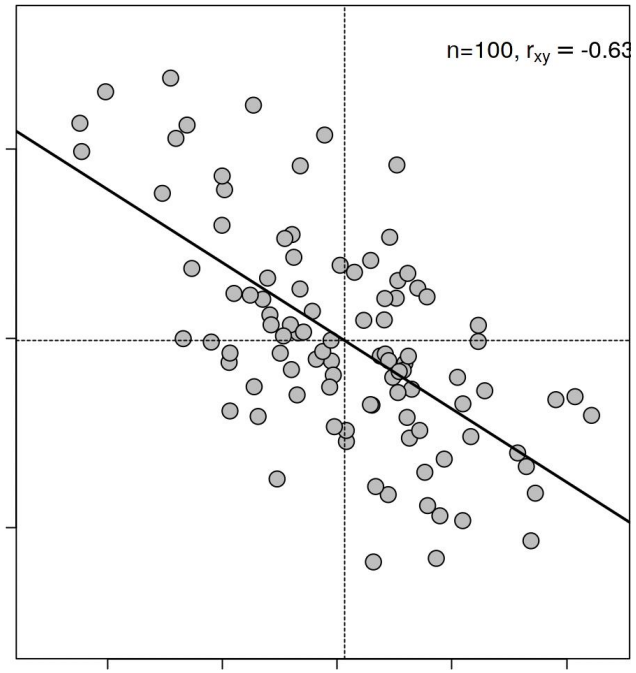

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