

Assignment 2

of Econometrics 1 (fall 2019)

The data file HOUSE.txt contains observations of variables that might determine house prices. Table 1 describes the meaning of variables.

Table 1. Variables in HOUSE.txt

Variable	Description
A	the age of the house in years
BA	the number of bathrooms in the house
BE	the number of bedrooms in the house
CA	a dummy variable equal to 1 if the house has central air conditioning, 0 otherwise
N	the quality of the neighborhood of the house (1 = best, 4 = worst) as rated by two local real estate agents
P	the price (in thousands of dollars) of the house
S	the size (in square feet) of the house
SP	a dummy variable equal to 1 if the house has a pool, 0 otherwise
Y	the size of the yard around the house (in square feet)

Perform an OLS regression analysis to explain the determination of house price using the data set and write a short report. **Save your report in PDF format** and send it via email to huangjp@szu.edu.cn no later than 23:59:59 on Nov 17, 2019.

Your report must cover the following aspects.

- A theory part describing factors that determine house price.
- A base specification of regression model implied by the theory. Represent your base specification in equation form.
- Several alternative specifications with reasoning.
- Regression result of the base specification represented in equation form, and full regression results represented in a table.
- Discussion about the regression results, including meanings of estimated coefficients, statistical significance, goodness of fit, economic implications, possible problems, and other concerns in the regression.
- A conclusion of your findings.
- Shortcomings of your analysis.

Notes:

1. You can attach gretl scripts in an appendix if you like. Although it is not required.
2. You may consider any possible functional form as well as simple linear models.
3. Descriptive statistics can be helpful in your analysis but are not required in the report unless you think it is worth mentioning.
4. If you use references, cite them properly!