

Exercise 6

The file *stockton96.gdt* contains 940 observations on home sales in Stockton, CA in 1996.

- a) Use least squares to estimate a linear equation that relates house price *PRICE* to the size of the house in square feet *SQFT* and the age of the house in years *AGE*. Interpret all the estimates.
- b) Suppose that you own two houses. One has 1400 square feet; the other has 1800 square feet. Both are 20 years old. What price do you estimate you will get for each house?
- c) Test the hypothesis that the size and the age of the house are important determinants of its price (separately as well as jointly)
- d) Using the Breusch-Pagan test for heteroscedasticity, test whether the model satisfies the homoscedasticity assumption by using the command for the BP test in Gretl.
- e) Use the White test to test for heteroskedasticity.
- f) What do you conclude regarding the heteroskedasticity? Does your conclusion depend on the choosing a specific test? Discuss also drawbacks of the BP and White tests.
- g) Test the hypothesis that the size and the age of the house are important determinants of its price (separately as well as jointly). Hint: choose appropriate standard errors. Does your conclusion differ from part (c)?