MATH 60604A Statistical Modelling

Chapitre 1 Exercises

Juliana Schulz

Question 1

The `CeoCompensation` dataset contains information on CEOs' Compensation taken from the May 25, 1992 issue of *Forbes Magazine*, entitled "What 800 Companies Paid for their Bosses''. The data consist of a random sample of 100 of the 800 CEOs studied in the article. In particular, the data include the following variables:

COMP	Sum of salary, bonus and other 1991 compensation, in thousands of dollars (does not include stock gains)
AGE	CEO's age, in years
EDUCATN	CEO's education level, 1 for no college degree, 2 for a college undergraduate degree and 3 for a graduate degree
BACKGRD	Background type, 0 for unknown, 1 for technical, 2 for insurance, 3 for operations, 4 for banking, 5 for legal, 6 for marketing, 7 for administration, 8 for sales, 9 for financial and 10 for journalism
TENURE	Number of years employed by the firm
EXPER	Number of years as the firm CEO
SALES	1991 sales revenues, in millions of dollars
VAL	Market value of the CEO's stocks, in natural logarithmic units
PCNTOWN	Percentage of firm's market value owned by the CEO
PROF	1991 profits of the firm, before taxes, in millions of dollars
COMPANY	Company name
BIRTH	CEO's birthplace

This dataset is taken from Frees, E. (2009). Regression Modeling with Actuarial and Financial Applications (International Series on Actuarial Science). Cambridge: Cambridge University Press.

a) Based on the data, provide an estimate along with a corresponding 99% confidence interval for CEOs' mean compensation (the `COMP` variable).

b) Do the data indicate that, on average, CEOs make $1 million? (Hint: you many use your answer from part a).)

c) A reader of Forbes magazine comments that CEOs tend to hold their position for at least 5 years. Formally test this using the data (in particular, the `EXPER` variable).