

Stats 4590: Determinants of Wages

Reference: Berndt, E.R. (1991) *The Practice of Econometrics*. NY: Addison-Wesley.

The Current Population Survey (CPS) is used to supplement census information between census years. These data consist of a random sample of 534 persons from the CPS, with information on wages and other characteristics of the workers, including sex, number of years of education, years of work experience, occupational status, region of residence and union membership.

The data set is on the course website, and you can use the **read.table** command to read the data into R.

The variables are described at the end of this description.

Your goal is to (i) develop an appropriate model to see if wages can be predicted from some of the characteristics of the workers; (ii) determine whether there is a gender gap in wages; (iii) develop an appropriate model to predict the gender of the worker from some of the other characteristics.

When conducting your analysis, some points to consider are: (1) use plots that may be of assistance; (2) consider if any transformation of variables is appropriate; (3) are there any possible explanations for the results you observe? Of course, if you think of any other issues to consider, you should mention these.

The datafile contains 534 observations on 11 variables sampled from the Current Population Survey of 1985. The variable names, in order from left to right, are:

1. EDUCATION: Number of years of education.
2. SOUTH: Indicator variable for Southern Region (1=Person lives in South, 0=Person lives elsewhere).
3. SEX: Indicator variable for sex (1=Female, 0=Male).
4. EXPERIENCE: Number of years of work experience.
5. UNION: Indicator variable for union membership (1=Union member, 0=Not union member).
6. WAGE: Wage (dollars per hour).
7. AGE: Age (years).
8. RACE: Race (1=Other, 2=Hispanic, 3=White).
9. OCCUPATION: Occupational category (1=Management, 2=Sales, 3=Clerical, 4=Service, 5=Professional, 6=Other).
10. SECTOR: Sector (0=Other, 1=Manufacturing, 2=Construction).
11. MARR: Marital Status (0=Unmarried, 1=Married)