

SEX DISCRIMINATION PROBLEM

13. Final Comments

The preliminary examination of the data with scatterplots in **Section 4** showed that in general the males received higher starting salaries than females hired at the same time. On the other hand, the males generally did have more years of education than the females, and this, not gender, may have been responsible for the observed differences in the starting salaries for males and females. Is the extent of the disparity between males and females starting salaries justified by this factor? Unfortunately, the scatterplots and the t-tools were not able to show how much of the disparity can be accounted by the differences in available measures of qualification.

The linear regression model applied to the data in **Section 8** made it possible to measure the effects of gender alone on starting salary. More precisely, the estimated regression equation indicated a real effect of gender on beginning salaries after accounting for the effect of education, experience, and seniority. More precisely, the median beginning salary for females was estimated to be only 88% of the median salary for males with comparable qualifications. The results are consistent with the stepwise forward and backward elimination regression procedures studied in **Section 10**.

Did regression techniques provide evidence of sex discrimination in setting beginning salaries? No, they did not. In order to prove sex discrimination we have to show that gender is the only *cause* of the observed disparity in starting salaries between males and females. As the case study is an example of an observational study, we are not able to draw any causal conclusions from the statistical analysis alone. It is possible that some confounding variables are responsible for the disparity in the starting salaries.

Therefore, it may be possible to conclude that males tend to receive larger starting salaries than females, even after accounting for all available factors, and still not be possible to conclude, from the statistics alone, that this happens because they are males.