

# SEX DISCRIMINATION PROBLEM

## 16. Final Comments

Does the discussion carried out in Sections 1-10 enable us to prove or reject sex discrimination? No, it does 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. We found in Section 3 that the case study is an example of an observational study, and therefore 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.

Descriptive and inferential methods 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? In general: After accounting for the differences in education background and other given measures of qualification, did females tend to receive smaller starting salaries than males?

We found that it is impossible to answer the question using the statistical techniques discussed in Sections 1-10. Scatterplots certainly prove that the males tend to receive higher salaries than females but they are not able to show how much of the disparity can be accounted by the differences in available measures of qualification.

We need statistical tools that make it possible to measure the effects of gender alone on starting salary. These tools are based on multiple regression and will be discussed in one of the future labs. You will see that the multiple regression techniques enable us to isolate the effects of gender on starting salaries from other available measures of qualification.

In general, some confounding variables may not be recognized or measured and these variables consequently cannot be accounted for the observed disparity. Obviously, it would be difficult or even impossible to consider all variables affecting starting salary. 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.

With the study design we are not able to prove sex discrimination because we are not able to isolate all confounding variables to see the effects of gender alone on starting salaries. Although statistical analysis alone is not able to prove sex discrimination, it can be useful in a court of law to establish discrimination.

The problems in **Section 10** addressed the problem of sex discrimination during employment with the bank. Indeed, if the sex discrimination was present in the employment process, it also should be present during employment with the bank. Usually, the same people make the decisions about starting salaries and raises and similar procedures are followed in both processes.