EC220-PS10

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Office hour: on Monday in S684
from 16:30 to 17:30

Heteroscedasticity

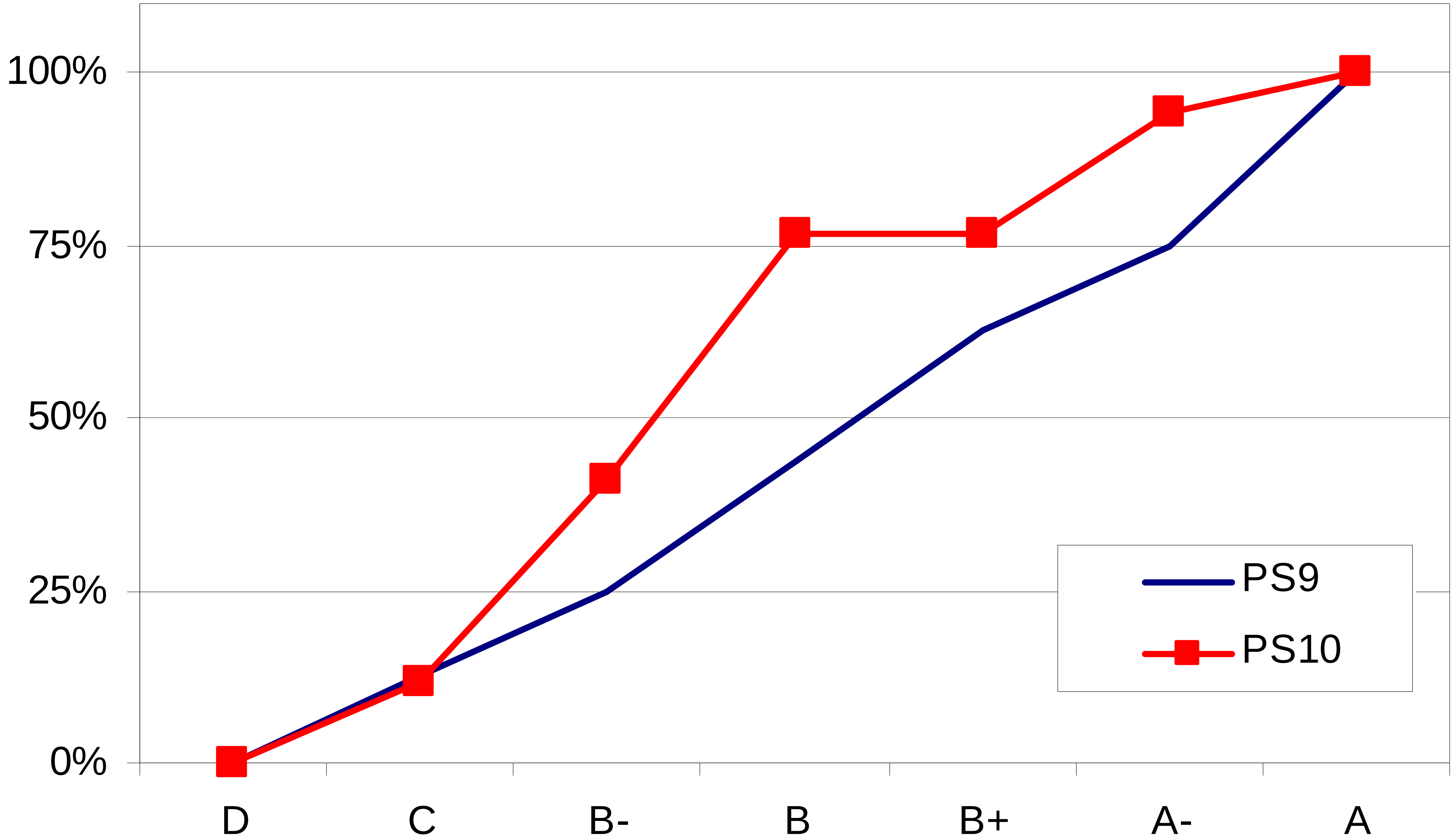
- Last week’s key words: omitted variable bias, proxy variable, ideal proxy, efficiency, restriction, t-test, F-test.

=> Main problem was ovbias.

- This week, heteroscedasticty. Usual ass. About the dist. Term are violated. This makes the ses, t-tests, F-tests invalid and OLS estimator is no longer BLUE (Gauss-Markov theorem)

Main causes of heteroscedasticity

- Variance of omitted variables (in the disturbance term) are correlated with the size of X or Y.
- Variance of measurement error in Y or X is correlated with the size of X or Y.
- Misspecified model (see this in add. Ex) :
  - True model is non linear, eg. Semilog earnings' function
  - Missing explanatory variables, interaction between explanatory variables.



A large share of people have B- or less.

Main issues

- Do not explain the assumptions of the Goldfeld and Quandt test, possible issues.
- Do not state clearly the null and alternative hypothesis.
- Explain the consequences of your test's conclusion. What does it imply to be able to reject Ho at the 0.1% sign level?
- Do not use your knowledge from previous chapters and problem sets to make your comments on the stata's outputs:
  - semilog vs linear specification
  - Monte carlo experiment