Problem Set 3

Submit by 8:00am, Friday 13st October

Exercise

A. Read the article "Legal determinants of World Cup Success" (by Mark West).

1) Formulate a critique related to the econometric strategy used in the paper. Think about which of the Gauss-Markov assumptions might be violated in the regressions and what that tells you about the interpretation of the results. Limit your critique to one page.
2) The 4 different estimations in this paper seem to lead to quite different results. If you wanted to conclude anything related to the determinants of World Cup soccer success, would you rely on any of these estimations? If so, on which one?

B. True or False: Missing observations can lead to both biased estimates and imprecise estimates. T/F? Explain.

Computer exercise

Continue with the same dataset nichh.dta from problem set 2. Estimate a log-linear model that allows to understand the ceteris paribus relationships between the household head's age, head's education, male and female labor endowments, land endowments and distances to the health clinic and school.

(1) What is the minimum significance level at which one can reject that hypothesis that education level of the household head does not affect total household consumption?

(2) Do your results allow you to conclude the returns to male adults in the household are larger than the returns to female adults? State the null hypothesis and the alternative hypothesis you are testing, and the significance level you are considering. Do the test and discuss. Does your answer differ depending on which significance level you consider?

(3) Test whether the 2 distance variables are jointly significant. Calculate the test by hand (using R). What can you conclude about the role of isolation on household welfare?

(4) Analyze the correlation between households' education and age. What does this correlation imply for your estimates? If you are estimating this model to obtain an estimate of the returns to household's heads education on household welfare, should you keep household age in the model?

(5) Test whether the coefficient of education is different from 0.06.

(6) Look at the distribution of the landarea variable. Then re-estimate the model excluding households with more than 100 ha. Analyze the change of the coefficient of the land area variable compared to the previous regression. Explain

(7) Give an example of an additional variable you might want to include in the regression, but for which you don't have data, and indicate the expected effect of that variable, as well as any changes you would anticipate to occur in the point estimates of the other variables.