Impact Evaluation and Applied Econometrics

Spring term 2016
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Assignment 2:
PC Project 1: Treatment Effects

In this PC session, we use data FERTILITY.dta which is downloadable from Wooldridge's webpage. We want to estimate the effect of attaining at least seven years of education on fertility. The data are for women of childbearing age in Bostwana. (See also page 624 in Wooldridge.)

These data are allowed to be used for the PC session only, they have to be deleted at the end of this term.

Solve 1-2a) before the PC session.

Information contained in the data is the following:

CHILDREN	Number of living children
AGEFBRTH	Age at first birth
EDUC	Years of education
AGE	In years
EVERMARR	1 if ever married
URBAN	1 if living in urban area
ELECTRIC	1 if has electricity
TV	1 if has TV
USEMETH	1 if ever use birth control
HEDUC	Husband's years of education
RELIGION	1 if catholic or protestant
FRSTHALF	1 if was born in the first half of the year
AGEFM	Age at first marriage

1) Descriptive Analysis

(a) Create the binary indicator EDUC7 equal to 1 if at least 7 years of education have been attained. Explain why seven years of education is the modal of positive education.

(b) Provide a first descriptive analysis about CHILDREN and AGEFBRTH by EDUC7. Discuss your results.

(c) How do women having completed 7 years of education differ from those who have not by AGE, EVERMARR, URBAN, ELECTRIC, TV, RELIGION, USEMETH and HEDUC?

2) Regression methods

(a) Regress CHILDREN on EDUC7. How do you interpret the results? Regress CHILDREN on EDUC7 and on AGE, AGESQ, EVERMARR, URBAN, ELECTRIC, TV, USEMETH, HEDUC, RELIGION. Comment on the estimated coefficient obtained for EDUC7.
Discuss the other significant coefficients, especially the problem than can arise by including USEMETH in the regression.

(b) Compare your results with those obtained when the dependent variable AGEFBRTH is used instead of CHILDREN.

(c) Perform an OLS analysis using the same dependent and independent variables as in a) and adding some interaction terms (URBAN*EDUC and AGE*EDUC).
Give an interpretation of the coefficients. Compare with your results in a).