



Übung zur Empirischen Wirtschaftsforschung

Übungsblatt 4

Please examine below OLS estimation results for the log earnings of Egyptian wage workers and answer the below questions:

Y Net basic income per 3 months in EGP

XYR Years of experience in the labor market

F 1 if respondent is Female, 0 if Male

ILLITERATE Cannot read or write

READ&WRITE Literate but without a certificate

PREPARATORYORLESS Primary or Preparatory certificate

VSECONDARY Vocational secondary certificate

GSECONDARY General secondary certificate

DIPLOMA Diploma certificate

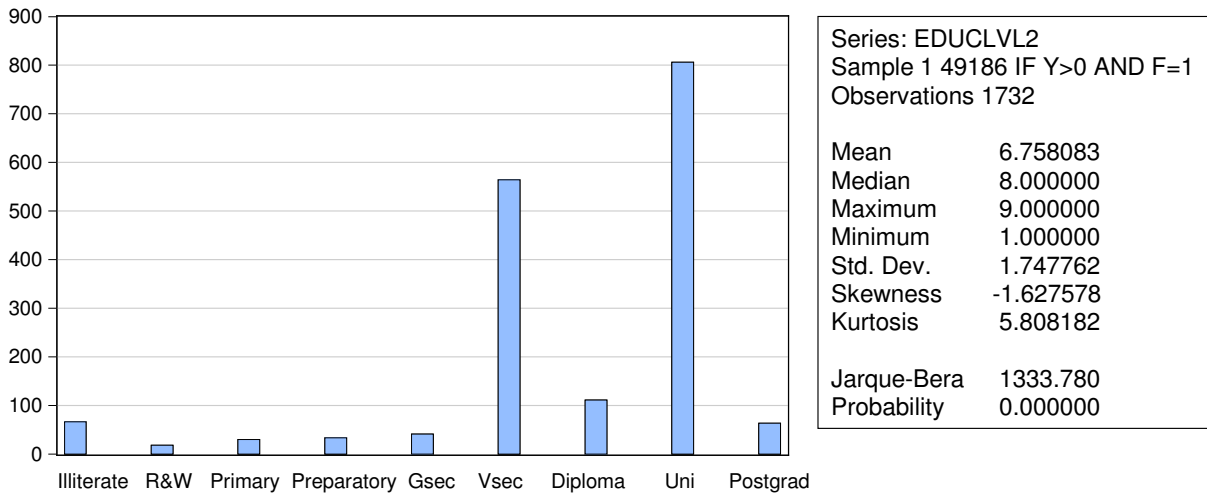
UNIVERSITY University certificate

PRIVATE 1 if respondent works in Private sector, 0 if works in the Government

URBAN 1 if respondent living in Urban area, 0 if lives in Rural area

Quelle: ELMPS 2012.

Exercise 1



For which persons is the descriptive statistics for education attainment shown?
Please analyze the figure.

Given figure 1, which educational level should be used as the reference group in the earnings function estimations? Why?

Exercise 2

=====Estimation 1

Dependent Variable: LOG(Y)

Method: Least Squares

Date: 07/19/17 Time: 09:55

Sample: 1 49186 IF F=1 AND URBAN=1 Included observations: 1078

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	7.096629	0.061722	114.9768	0.0000
XZR	0.044300	0.006258	7.078491	0.0000
XZR ²	-0.000440	0.000168	-2.625759	0.0088
ILLITERATE	-0.514572	0.105914	-4.858395	0.0000
READWRITE	-0.138253	0.193177	-0.715679	0.4743
PREPARATORYORLESS	-0.053446	0.110807	-0.482336	0.6297
GSECONDARY	0.170026	0.129558	1.312349	0.1897
DIPLOMA	0.047452	0.078181	0.606953	0.5440
UNI	0.400613	0.044301	9.042975	0.0000
PRIVATE	0.091526	0.052154	1.754922	0.0796

R-squared	0.263426	Mean dependent var	7.830539
Adjusted R-squared	0.257219	S.D. dependent var	0.693979
S.E. of regression	0.598104	Akaike info criterion	1.819130
Sum squared resid	382.0542	Schwarz criterion	1.865353
Log likelihood	-970.5109	Durbin-Watson stat	1.874154
F-statistic	42.43949	Prob(F-statistic)	0.000000

=====Estimation 2

Dependent Variable: LOG(Y)

Method: Least Squares

Date: 07/19/17 Time: 09:55

Sample: 1 49186 IF F=1 AND URBAN=0 Included observations: 518

Variable	Coefficient	Std.Error	t-Statistic	Prob.
C	7.135466	0.083403	85.55435	0.0000
XZR	0.047951	0.009936	4.825911	0.0000
XZR ²	-0.000602	0.000294	-2.050328	0.0408
ILLITERATE	-0.249897	0.143953	-1.735959	0.0832
READWRITE	-0.219614	0.275901	-0.795986	0.4264
PREPARATORYORLESS	0.143663	0.143840	0.998775	0.3184
GSECONDARY	-0.149159	0.162276	-0.919168	0.3584
DIPLOMA	0.241324	0.123651	1.951653	0.0515
UNI	0.118321	0.063807	1.854352	0.0643
PRIVATE	-0.427007	0.086618	-4.929756	0.0000

R-squared	0.279487	Mean dependent var	7.572090
Adjusted R-squared	0.266722	S.D. dependent var	0.703945
S.E. of regression	0.602800	Akaike info criterion	1.844653
Sum squared resid	184.5908	Schwarz criterion	1.926699
Log likelihood	-467.7652	Durbin-Watson stat	2.073535
F-statistic	21.89479	Prob(F-statistic)	0.000000

What is the difference between the first and second estimation?

Please comment on the number of observations for both estimations. What does the difference show?

What is the average income level for each group?

Analyze the statistical and economic significance of the coefficients and the estimation quality for both models.

Compare the influence of coefficients between both models.