

Section Week 6

The CPS data sample contains three variables incwage, region, and sex. Incwage is the average yearly income of an individual. Sex is equal to 1 for male and 2 for female. Region is equal to 1 for Northeast, 2 for Midwest, 3 for South, and 4 for West.

1. Generate a new variable equal to 1 if in South Region and 0 for everybody else.

```
series south = 0
smpl if region = 3
south = 1
smpl @all
```

2. Run a regression of an outcome on a constant and a non constant variable, where the standard errors computed by Eviews are robust standard errors.

```
q1.ls (cov = white) incwage c south
```

3. Interpret the coefficient of the non-constant variable.

Dependent Variable: INCWAGE

Method: Least Squares

Date: 05/03/18 Time: 21:16

Sample: 1 143626

Included observations: 143626

White heteroskedasticity-consistent standard errors & covariance

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	29152.24	160.5539	181.5729	0.0000
SOUTH	3859.010	432.2316	8.928107	0.0000
R-squared	0.000621	Mean dependent var		29766.05
Adjusted R-squared	0.000614	S.D. dependent var		56616.11
S.E. of regression	56598.72	Akaike info criterion		24.72537
Sum squared resid	4.60E + 14	Schwarz criterion		24.72551
Log likelihood	-1775601.	Hannan-Quinn criter.		24.72542
F-statistic	89.30903	Durbin-Watson stat		2.003789
Prob(F-statistic)	0.000000	Wald F-statistic		79.71109
Prob(Wald F-statistic)	0.000000			

Individuals in the South earn on average \$3859 more than individuals in other regions.

4. Determine whether they can reject the null that the coefficient of the non-constant variable is =0 in the full population.

We can reject the null hypothesis that the coefficient on South is equal to 0 at the 95% level. The t-statistic of 8.9 is greater than 1.96.