

Stata: In-Class Exercise Solution

Use the dataset `Earnings_and_Height` and answer the following questions.

1. What is the median value of height in the sample?

sum height, detail

The median height in the sample is 67 inches.

2. Estimate average earnings for workers whose height is at most 67 inches.

sum earnings if height <= 67

44,488 dollars

3. Estimate average earnings for workers whose height is greater than 67 inches.

sum earnings if height > 67

49,988 dollars

4. On average, do workers taller than 67 inches earn more than shorter workers? How much more? What is a 95% confidence interval for the difference in average earnings?

gen split = height <= 67

ttest earnings, by(split) unequal

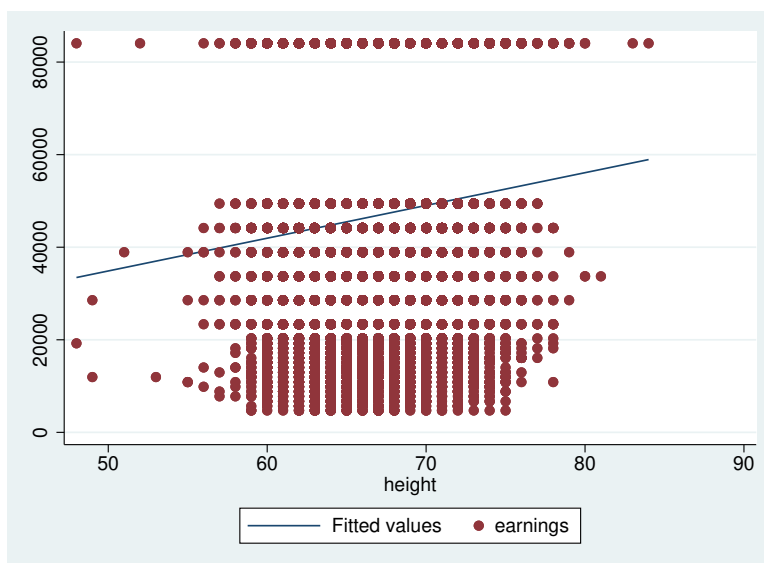
On average, taller workers earn 5,499 dollars more than shorter workers. The 95% confidence interval is [4,706, 6,293].

5. Construct a scatterplot of annual earnings (*Earnings*) on height (*Height*).

twoway (scatter earnings height) (lfit earnings height)

6. Run a regression of *Earnings* on *Height*.

reg earnings height



(a) What is the estimated slope?

707.7

(b) Use the estimated regression to predict earnings for a worker who is 67 inches tall, for a worker who is 70 inches tall, and for a worker who is 65 inches tall.

46,901, 49,204, and 45,486

7. Repeat 6(a) for women.

reg earnings height if sex==0

8. Repeat 6(a) for men.

reg earnings height if sex==1

9. Suppose height were measured in centimeters instead of inches. Run a regression of *Earnings* on *Height* (in cm). (Hint: 1 inch=2.54 cm)

*gen height_cm=height*2.54*

reg earnings height_cm

(a) What is the estimated slope of the regression?

278.6

- (b) What is the estimated intercept?
-512.7
- (c) What is the R^2 ?
0.0109
10. Suppose earnings were measured in thousand dollars. Run a regression of *Earnings* (in thousand dollars) on *Height*.
gen earnings_t=earnings/1000
reg earnings_t height
- (a) What is the estimated slope of the regression?
.7077
- (b) What is the estimated intercept?
-.5127
- (c) What is the R^2 ?
0.0109