

GOV 1000/ 2000e/ 2000/ E-2000 Section 7

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October 17, 2013

LOGISTICS - THIS WEEK

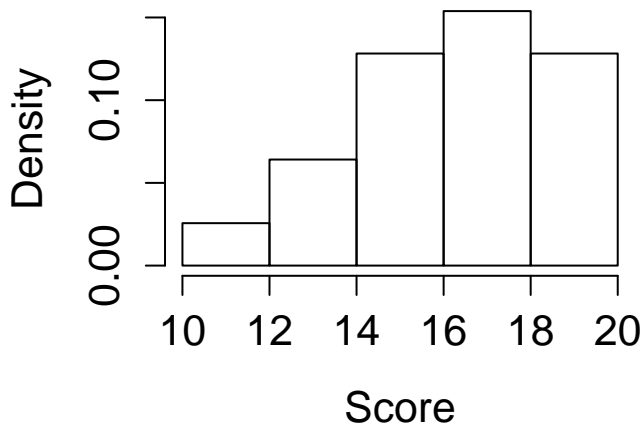
Problem Set 6 - Due by 1pm on Tuesday to course dropbox.

Problem Set 5 Corrections - Due by 1pm on Tuesday to course dropbox.

Reading Quiz - Due by 9pm on Sunday on course website.

Midterm Solutions - Posted tonight. Go through and see what is still confusing.

MIDTERM DISTRIBUTION

**Midterm Distribution
(out of 20)**

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

► Estimand?

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

► Estimand? (β_0, β_1)

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

- ▶ Estimand? (β_0, β_1)
- ▶ Estimator?

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

- ▶ Estimand? (β_0, β_1)
- ▶ Estimator? $(\hat{\beta}_0, \hat{\beta}_1) = \min_{\beta_i} \sum_{i=1}^n (\epsilon_i)^2$

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

- ▶ Estimand? (β_0, β_1)
- ▶ Estimator? $(\hat{\beta}_0, \hat{\beta}_1) = \min_{e_i} \sum_{i=1}^n (\epsilon_i)^2$
- ▶ Estimate?

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

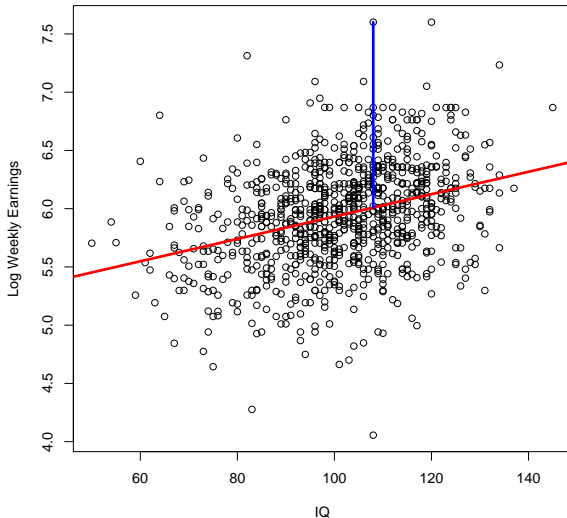
- ▶ Estimand? (β_0, β_1)
- ▶ Estimator? $(\hat{\beta}_0, \hat{\beta}_1) = \min_{e_i} \sum_{i=1}^n (\epsilon_i)^2$
- ▶ Estimate? $(\hat{\beta}_0, \hat{\beta}_1)$

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$

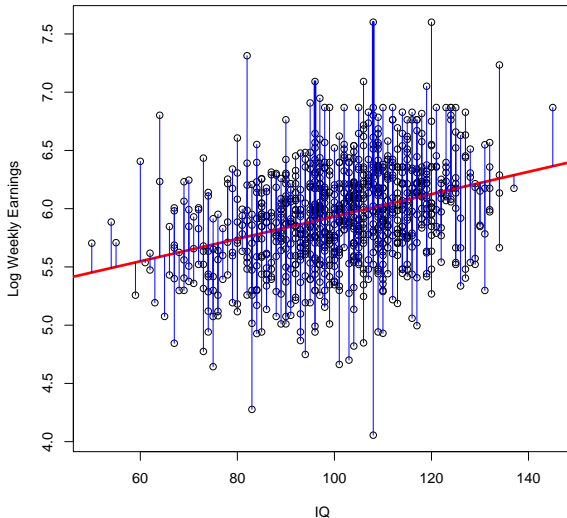
What are we doing?

$$(\hat{\beta}_0, \hat{\beta}_1) = \min_{b_0, b_1} \sum_{i=1}^n (Y_i - b_0 - b_1 X_i)^2$$

$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$



$$Y_i = \beta_0 + \beta_1 X_i + \epsilon_i$$



$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

► Estimand?

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

► Estimand? $(\beta_0, \beta_1, \beta_2)$

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

- ▶ Estimand? $(\beta_0, \beta_1, \beta_2)$
- ▶ Estimator?

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

- ▶ Estimand? $(\beta_0, \beta_1, \beta_2)$
- ▶ Estimator? $(\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2) = \min_{e_i} \sum_{i=1}^n (\epsilon_i)^2$

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

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- ▶ Estimator? $(\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2) = \min_{e_i} \sum_{i=1}^n (\epsilon_i)^2$
- ▶ Estimate?

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

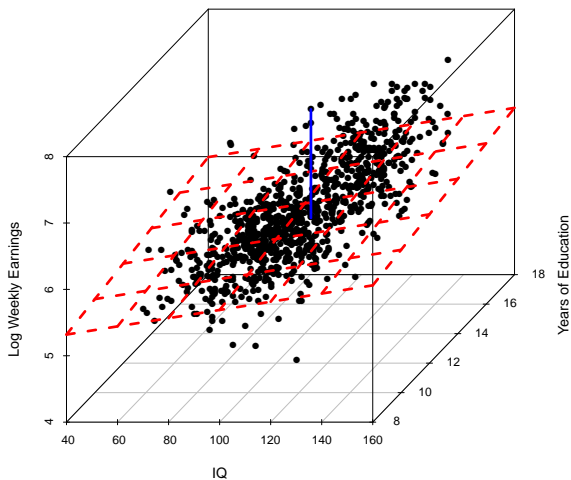
- ▶ Estimand? $(\beta_0, \beta_1, \beta_2)$
- ▶ Estimator? $(\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2) = \min_{e_i} \sum_{i=1}^n (\epsilon_i)^2$
- ▶ Estimate? $(\hat{\beta}_0, \hat{\beta}_1, \hat{\beta}_2)$

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

What are we doing?

$$(\hat{\beta}_0, \hat{\beta}_1) = \min_{b_0, b_1, b_2} \sum_{i=1}^n (Y_i - b_0 - b_1 X_{1i} - b_2 X_{2i})^2$$

$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$



$$Y_i = \beta_0 + \beta_1 X_{1i} + \beta_2 X_{2i} + \epsilon_i$$

