Quiz 2

Instructions

Before attempting the quiz, please make sure you are familiar with the material covered last week in class. For questions 8, 9, 10, you will Trade and Growth dataset from last week's quiz and stargazer command to create a table of regression results. See the **stargazer help** or **lecture 2 slides** (slide 49) for an example. Before you start coding, add the following code lines to the setup section of your RMarkdown:

```
cse=function(reg) {
    rob=sqrt(diag(vcovHC(reg, type="HC1")))
    return(rob)
    }
```

Question 1

1 / 1 pts

1. Both X and Y have mean 0. What can you say about the intercept when regressing Y on X ?

- It must be exactly 1.
- It must be 0. (Correct!)
- Nothing can be said from information given.
- It is undefined as you have to divide by 0.

Question 2

1 / 1 pts

If R-squared is 0.6 when we regress Y on X, then

- Variance(Y)/Variance(X)=0.6
- The slope is greater than the variance of X
- The slope is greater than 0

Correct!

- SSR/TSS=0.4

Question 3

1 / 1 pts

If X in linear regression is in centimeters and I convert to meters, what happens to the slope?

Correct!

- It would get multiplied by 10
- It would get multiplied by 100
- It would get divided by 100.
- It would get divided by 10.

Question 4

1 / 1 pts

Other things equal, the OLS estimate of the slope will be greater if

- The variance of X is greater
- The covariance between X and Y is smaller

The intercept is positive.

Correct! The covariance between X and Y is greater

Question 5

1 / 1 pts

The slope estimator has a smaller standard error, other things equal, if

There is a large variance of the error term, u

The sample size is smaller

Correct! There is more variation in the explanatory variable, X

The intercept is small.

Question 6

1 / 1 pts

E(u_i | X_i)= 0 says that

Correct! The conditional distribution of the error given the explanatory variable has a zero mean.

- The sample mean of the Xs is much larger than the sample mean of the errors
- The sample regression function residuals are unrelated to the explanatory variable
- Dividing the error by the explanatory variable results in a zero (on average)

Question 7

1 / 1 pts

The reason why estimators have a sampling distribution is that:

- Individuals respond different to incentives
- The values of the explanatory variable and the error term differ across samples.

Correct!

- In real life you typically get to sample many times
- Economics is not a precise science

Question 8

1 / 1 pts

If you run a simple regression of growth on trade share, the R-squared suggests that:

- Trade share explains 1.79% of the variation in growth across countries.
- None of the above.
- Trade share explains 88% of the variation in growth across countries.

Correct!

- (selected) Trade share explains 12% of the variation in growth across countries.

Question 9

1 / 1 pts

Remove Malta from the dataset, and run again a simple regression of growth on trade share without Malta in the sample. You learn that an increase in trade share by 1% will:

- increase growth rate by 0.168%.
- increase growth rate by 0.023%.
- increase growth rate by 0.23%.

Correct!

- (selected) increase growth rate by 0.0168%.

Question 10

1 / 1 pts

Remove Malta from the dataset, and run again a simple regression of growth on trade share without Malta in the sample . The standard error of the slope estimate is:

- 0.99
- 0.54
- 0.87

Correct!

- 1.79

Quiz Score: **10** out of 10