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More on the Fisher Exact Test - Quiz

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Question 1

1/1 point (graded)

In this segment, Professor Duflo describes the process for conducting the Fisher exact test. In this test, all possible _____ are tested while keeping _____ fixed. This is called _____.

- a. Observations ; treatment assignments ; bootstrapping
- b. Treatment assignments ; outcomes ; bootstrapping
- c. Observations ; treatment assignments ; a permutation test
- d. Treatment assignments ; the observations ; a permutation test ✔

Explanation

In the Fisher exact test, (simulated) treatment effects are calculated under all possible treatment assignments, keeping the number of treated and control units the same as in the original assignment and holding the observations themselves constant. For example, we first assume that the first half of

- Module 5: Moments of a Random Variable, Applications to Auctions, & Intro to Regression
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Causality
Finger Exercises due Nov 21, 2016 at 05:00 IST

Analyzing Randomized Experiments
Finger Exercises due Nov 21, 2016 at 05:00 IST

the units are treated and the second are control, and we compute the treatment effect under this assignment.

Submit You have used 1 of 2 attempts

✔ Correct (1/1 point)

Question 2

1/1 point (graded)

After calculating the treatment effect under all possible treatment assignments, the next step is to:

- (•) a. Count the number of cases in which the absolute value of the simulated treatment effect is greater than the treatment effect actually observed, divide by the total number of cases, this is the relevant p-value ✔
- ( ) b. Count the number of cases in which the absolute value of the simulated treatment effect is less than the treatment effect actually observed, divide by the total number of cases, this is the relevant p-value
- ( ) c. Average the p-values from each of the possible treatment effects
- ( ) d. Count the number of cases when the treatment effect is at least as large as the observed case

Use of Randomization and Nonparametric Regression
Finger Exercises due Nov 21, 2016 at 05:00 IST

Module 8: Homework
Homework due Nov 14, 2016 at 05:00 IST

▸ Exit Survey

Explanation
The next step in the Fisher exact test would be to count up the number of cases in which the absolute value of the calculated treatment effect is greater than the treatment effect actually observed, and divide by the total number of cases to get the relevant p-value: under the sharp null hypothesis (the treatment effect is zero for everyone), the observed treatment effect should be somewhere in the middle of the distribution of simulated differences. The null will be rejected if the observed treatment effect is very much to the right (or the left) of the distribution.

Submit You have used 1 of 2 attempts

✔ Correct (1/1 point)

Question 3

1/1 point (graded)
In the honey example discussed in class, there are six observations and 20 possible treatment assignments (only one of which is actually observed). For 16 of the possible treatment assignments, the absolute value of the calculated treatment effect is larger than the one actually observed (which was 1), such that the associated (exact) p-value is 0.8.

True or false: This p-value tells us that we can reject the null of no effect.

- a. True
- b. False ✔

Explanation

This is false. The p-value of 0.8 is large, which indicates that the observed treatment effect of 1 is likely due to chance, and we can conclude that the observed treatment effect of 1 is insignificant.

Submit You have used 1 of 2 attempts

✔ Correct (1/1 point)

Discussion

Topic: Module 8 / More on the Fisher Exact Test - Quiz

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