

Economics 312 Daily Problem #20

Spring 2020
March 2

Suppose that a college established an academic support seminar during the mid-semester break and early in the spring semester for selected, continuing first-year students. All students with fall-semester GPAs below 2.5 are eligible and are invited to attend. (Note that although Reed has established such a program, I do not know what criteria it uses, so don't infer anything about Reed's program from this problem!)

You have a sample of each eligible student with the following variables: $g_{i,t}$ = semester GPA of i th student for semester t , $t = 1$ for spring, 0 for fall, p_i = a dummy variable that is one if the student participated in the program.

You run the following regression: $g_{i,t} = \beta_0 + \beta_1 p_i + \beta_2 t + \beta_3 p_i \times t + u_i$.

1. How would you use the results of this regression to assess the success of the program?
2. Why does this approach yield more reliable results than just looking at $g_{i,1} - g_{i,0}$ for people in the program?
3. What other (potentially observable) variables might be useful to include in this regression to improve its reliability?
4. Participation in the program is voluntary. Does this create a problem in the analysis? How, if at all, could this problem be fixed?