ICPSRCDA18 CDA: Binary Regression Model: Part 2

Your Name: Points received: ____ out of 80

In what follows, I refer to the dependent variable as Y, the binary variable you interpret as B, the continuous variable you interpret as C, and all other variables in your model as X.

1. ___ of 5: Using the cleaned data you created and saved in BRM P1, re-estimate the **logit** model of Y on B, C, and X from question 3 of BRM Pt1. Your results must match.
2. ___of 10: Compute the predicted probabilities for all observed cases and include a *dotplot* of these probabilities (ensure your y-axis runs from 0 to 1). What substantive insights do you gain from this graph?
3. ___ of 10: Compute the discrete change coefficients for C and B using `mchange` in Stata, or in R for an appropriate amount of change (e.g., unit, 0 to 1, standard deviation). Hold other variables at values you find interesting or useful.
4. ___ of 10: Choose an appropriate discrete change coefficient for B from your `mchange` output and calculate the associated 95% confidence interval, or in R calculate the 95% confidence interval for your computed discrete change. Interpret this discrete change coefficient, including the confidence interval.
5. ___ of 10: Compute the discrete change coefficient and 95% confidence interval for C changing from .5 standard deviations below the mean to .5 standard deviations above the mean. (Hint: In Stata, you can use `mchange` to confirm you did this correctly). Interpret this discrete change coefficient, including the confidence interval.
6. ___ of 15: Generate and plot predicted probabilities over the range of variable C for both values of B. Hold the other variables at the same location you chose in question 3 above. Present the plot. Write a paragraph telling the **story** of your results. This should read as though it were part of a journal article. **HINT: Assume your editor tells you at the last minute that they can't include the plot itself in the paper. What would you readers need to know to correctly visualize the relationship? *Don't be afraid to include numbers!*** In other words, talk about the *magnitude* of the effects, as well as the direction. Compute and report associated confidence intervals as needed (Hint: you may need to use other commands to compute these, e.g., `margins` or `mchange` in Stata, `diff` in R). Also, in your interpretations, be sure to indicate the levels of any other variables in your model.
7. ___ of 10: Looking back on your work from BRM P1 & P2, which method(s) of interpretation did you find most useful (factor change, discrete change, plotting, some combination)? Why?
8. ___ of 10: My assessment of the overall effectiveness of your answers.