

ICPSR11 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, estimate the **logit** model of Y on B, C, and X from question 3 of BRM P1. Make sure your results match.
2. ____ of 10: Compute the predicted probabilities for all cases using the `predict` command and include a `dotplot` of these probabilities (with the axis running from 0 to 1). Describe the plot (this shouldn't require more than 1 or 2 sentences)?
3. ____ of 10: Compute the discrete change coefficients for C and B using `prchange`. Hold the other variables at values you find interesting or useful.
4. ____ of 10: Choose an appropriate discrete change coefficient for B from your `prchange` output and calculate the associated 95% confidence interval using the commands `prvalue`, `save` and `prvalue`, `dif`. Make sure the magnitude of the change matches your output in 3 above. Interpret this discrete change coefficient, including the confidence interval.
5. ____ of 10: Compute the discrete change coefficient (and 95% confidence interval) for a centered standard deviation change in C using `prvalue`, `save` and `prvalue`, `dif`. Make sure the magnitude of the change matches your output in 3 above. Interpret this discrete change coefficient, including the confidence interval.
6. ____ of 15: Use `prgen` and the `graph` commands to 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. Incorporate the magnitude of the effects and the associated confidence intervals as needed (Hint: use `prchange` and/or `prvalue`, `save` and `prvalue`, `dif` to calculate these). Make sure to indicate the levels at which the other variables in your model are being held.
7. ____ of 10: Looking back on your work from BRM P1 & P2, which method 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.