ICPSRCDA2017

Assignment 5: the ordinal regression model: Grading guidelines

Odds Ratios & Discrete Changes

1. Must show distribution of dependent variable. (-2)
2. Unless instructed otherwise for a particular purpose, do not interpret the raw beta [log odds] coefficient. It does not represent predicted probability. (-2)
3. For the ORM, factor changes are always related to the odds of being in [generally] higher categories to [generally] lower categories. As such, do not discuss the odds of being in specific categories vs. other specific categories. (-0 to -3)
4. For discrete change, do not say "change by .03 percent" or "change by 3%". Use either "change in probability of .03" or "change of 3 percentage points". (-2)
5. Need to indicate where other variables are held. Also, do not simply say "holding constant"; rather say "holding at [xx value]." (-2)
6. It is not necessary to interpret all discrete changes for all categories, but you should paint an overall picture of the effect. For example, "For a standard deviation change in age centered around the mean, the predicted probability of strongly agreeing increases by 0.17. This increase is offset by smaller decreases in the predicted probabilities of the other three outcome categories." (-0 to -4)

Reproducing Discrete Changes using mchange and mlincom (8&10)

7. Does not match answer from `mchange` in question 7 (-2)
8. Incorrect marginal effects (for example, change was not centered) (-2)

Figures

9. Make sure labels in graphs are substantively clear; don't use default labels. (-1 each)
10. Need some reference to magnitude and significance when interpreting the graphs. (-3 to -5)
11. For cumulative plot, be sure reader can tell which portion of the graph corresponds to which outcome category. (-2)
12. Graphs should be properly scaled and not include unnecessary whitespace. (-1)

Brant test

13. A significant Brant test indicates a violation of the parallel regression assumption. (-4)
14. When discussing the results of the Brant test, report on both the omnibus test (all variables) & specific variables that violate the parallel regression assumption. (-2)

Various

15. How large is a standard deviation? (-2)
16. Include significance information and confidence intervals when appropriate. (-0-3)
17. Interpretation is difficult to understand or is not supported by the evidence. (-1 to -2)
18. Show the output associated with your answer and highlight/underline relevant numbers. Output and log files should be clean, free of errors, and easy to read. Don't include unnecessary output (like your graph commands) in the assignment. Point to the log file instead. (-0 to -5)
19. Unless all three variables are included in your graph, you should indicate the level of the third variable in your description. (-0-3)

Parallel regression assumption & q. 15

20. While removing cut-points does not affect the odds ratios, it will affect the discrete change as no τ for that category will be estimated. Thus to compare discrete change across multiple countries, you will also need to collapse categories in other countries (-1 to -3)
21. For B: As long as you assume that individuals move to adjacent categories—e.g., that individuals who couldn't pick 'disagree' picked either 'agree' or 'strongly disagree'—the parallel regression assumption is not violated and factor change coefficients would remain comparable. It would only be violated if you cannot assume that individuals moved to adjacent categories. Again however, the lack of estimated τ complicate comparison of discrete change coefficients across countries (-1 to -3)