Notes on Proportional odds model

**Available Package**

Proportional odds model applies only when the response is ordinal and an additional assumption (the proportional odds assumption) holds. This model can be fit using *polr()* in the MASS package, *lrm()* in the rms package and *vglm()* in VGAM[[1]](#footnote-1). Example codes for *polr()* can be found in the folder named “PO fitting example”, which is from the reference book “Discrete Data Analysis with R”. Of course detailed explanations of the package can be found online.

Another package might be useful is the “glmnetcr” package (include penalization). I also found an article “glmnetcr: An R Package for Ordinal Response Prediction in High-Dimensional Data Settings” that has detailed discussion about this package. It is included in the folder.

**Things to do**

Ahmet, please choose one of the above packages to fit the proportional odds(PO) model, test the PO assumption. If possible, visualize results for the model.

Make one or two slides that showed your results for the PO model.

If you have any questions, please let me know.

Shuming

1. Michael, Friendly, David, Meyer. Discrete Data Analysis with R. [↑](#footnote-ref-1)